HEY! BO DIDDLEY P. 80 • MAFIA PRINCESS P. 96

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AUGUST 2008

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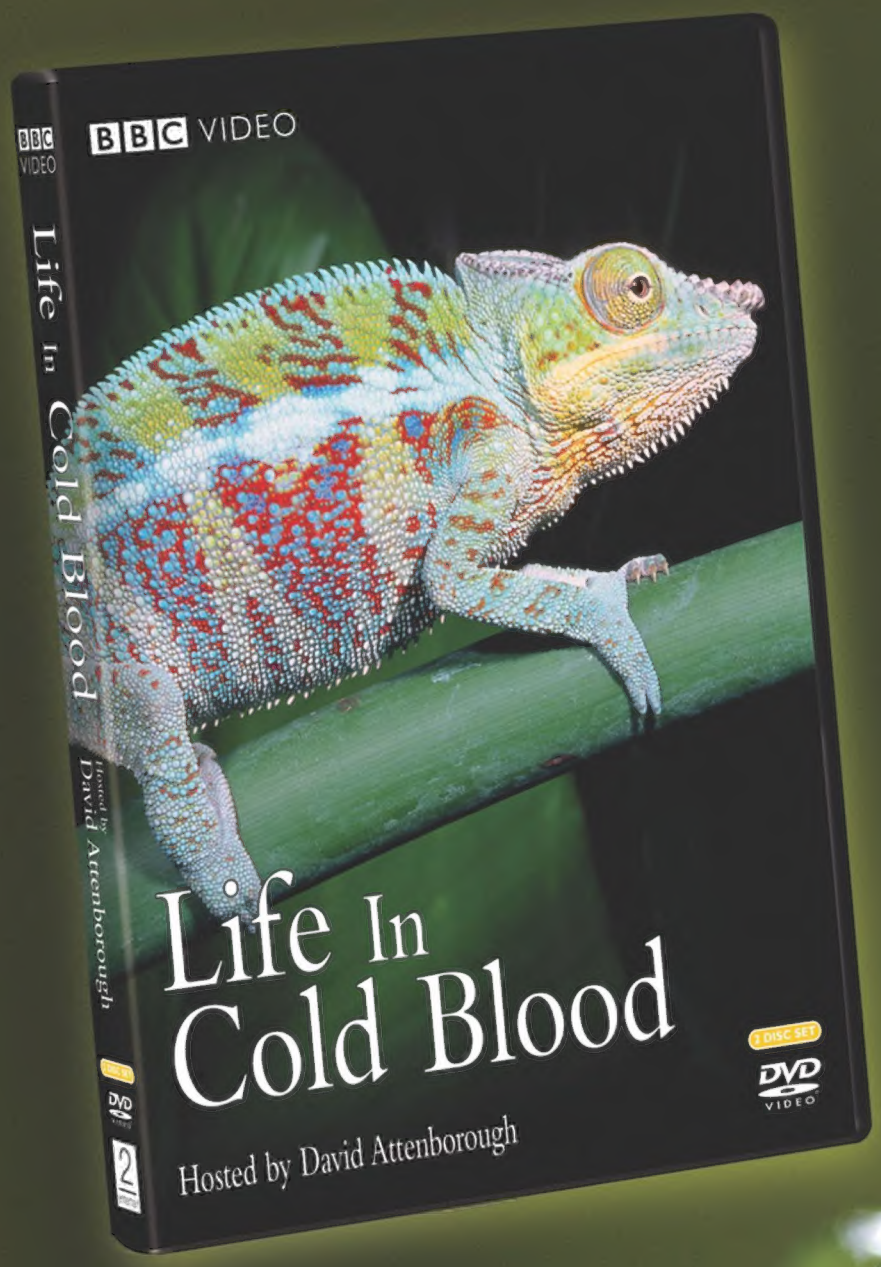
BBC Warms Hearts with Cold-Blooded Creatures



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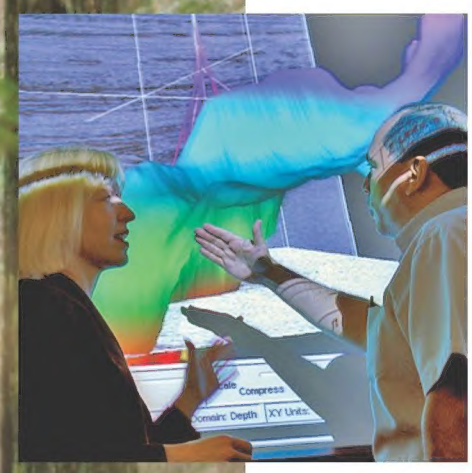

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In 1924, teenage lovers Nathan Leopold and Richard Loeb kidnapped and murdered a 14-year-old boy for sport. In an adaptation from a new book about the celebrated case, the public's call for vengeance is thwarted by the great defense attorney Clarence Darrow

BY SIMON BAATZ

Though the connection may not be obvious, his pictures of people relaxing and playing were deeply influenced by the events of September 11.

"THE BEACH," PAGE 64

ON THE COVER **In Jinshanling, home to a popular stretch of the Great Wall, tourism can be a mixed blessing: visitors bring much-needed money, but they may also hasten the decline of the world monument.**

PHOTOGRAPH BY BLAINE HARRINGTON

THIS PAGE **For a new series of extraordinary, large-scale works such as this untitled image, the photographer Richard Misrach captured the goings-on at a Hawaii beach from a hotel's balconies.**

PHOTOGRAPH BY RICHARD MISRACH
COURTESY OF FRAENKEL GALLERY, SF, MARC SELWYN FINE ART, LA AND PACE/MACGILL GALLERY, NY

Smithsonian departments

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In Bo Diddley's hands, the beat was alive. He did something different with it every time he recorded it. It's the difference between copying and creating.

"WHO DO YOU LOVE?" PAGE 80

Bo Diddley (in New York City in 2002) said he didn't know the term "diddley bow," which is a one-string African instument, when he chose his stage name.

PHOTOGRAPH BY NANCY KASZERMAN / ZUMA PRESS

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FROM THE EDITOR

Challenges

To save a wall and understand killers' motives

BY CAREY WINFREY

FORMER *Newsweek* foreign correspondent Brook Larmer lived in China for some seven years before moving to Bangkok in 2006, and he had crisscrossed the Great Wall on a number of occasions. "It's not just a structure but a living organism," he says. "It may have been 364 years since the wall served any kind of military function, but its meaning and the way it's defined both in China and abroad continue to evolve."

Reporting "Up Against the Wall" (p. 32), Larmer began with an extended hike along what is known as the "wild wall" in Hebei Province, to which he was drawn by news of a man whose family has lived close to the structure for hundreds of years and who is determined to preserve it. He then went to the steppes of western China, where he found a more austere wall made out of earth instead of stones. Both sections are under threat by the forces of nature and development. "When you travel along the wall," says Larmer, "you realize how vulnerable it is. It's the greatest cultural preservation challenge in the world. You have so many different kinds of wall that are needing preservation and so many that require very different approaches. And when you go look at it close up and see entire stretches of it that have basically disappeared, you realize that they are gone forever. They cannot be recovered. You just hope that this network of civil society that is starting to coalesce will do so quickly enough to protect what remains."

Larmer: Hope for a network

SIMON BAATZ, author of "Criminal Minds" (p. 70), teaches history at John Jay College of Criminal Justice in New York City. On a visit to London in the 1990s, Baatz killed a free afternoon by going to see Alfred Hitchcock's *Rope*, a movie loosely based on the 1924 murder of 14-year-old Bobby Franks by teenagers Nathan Leopold and Richard Loeb. Intrigued, Baatz discovered that nobody had written an authoritative history of the case. He also discovered that psychiatry played an important role in the trial: "I think you can say that my background in the history of science made me see something in the Leopold and Loeb case that other people hadn't."

Baatz: Intrigued by *Rope*

To many at the time, the case was seen as evidence that America had lost its bearings. "Think about it," Baatz says. "Two clever, rich teenagers having this love affair, going out and killing a 14-year-old literally for the thrill of it, for the sensation of killing someone else. That was seen as so corrupt and decadent. It was seen as a signal to many people that there was something perverse about American society. It's very difficult, really, to understand it. Even now, I wouldn't claim that I understand why they did it."

HANNAH BEECH; THE PHOTOGRAPHER'S GALLERY

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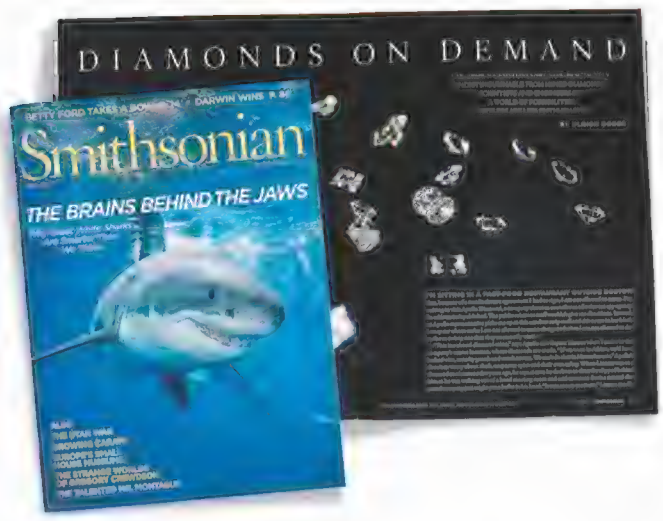
LETTERS READERS RESPOND TO THE **JUNE** ISSUE



My wedding ring contains five diamonds created in a laboratory ["Diamonds on Demand"] by the chemical vapor deposition process, or CVD. Several jewelers have said the stones are flawless and have been surprised to learn they are man-made. When you can have the beauty, sparkle and allure without either the environmental or social disruptions, why wouldn't you opt for a laboratory diamond?

MEGHAN CONNOLLY HAUPT, OAKLAND, CALIFORNIA

DARWIN'S PREDECESSORS

IN LISTING the progenitors of evolutionary thought, Richard Conniff's "On the Origin of a Theory" fails to include Carolus Linnaeus, who in the mid-1730s foreshadowed Darwin in his belief in a universal struggle for survival. Nor can one ignore the French author-diplomat Benoît de Maillet, who, in a thinly veiled work of fiction published in 1748, outlines what many consider a precursor to the theory of evolution, a view suggested by its subtitle, *Discourses Between an Indian Philosopher and a French Missionary, on the Diminution of the Sea, the Formation of the Earth, the Origin of Men and Animals, and Other Curious Subjects Relating to Natural History and Philosophy*.

RONALD M. DISALVO
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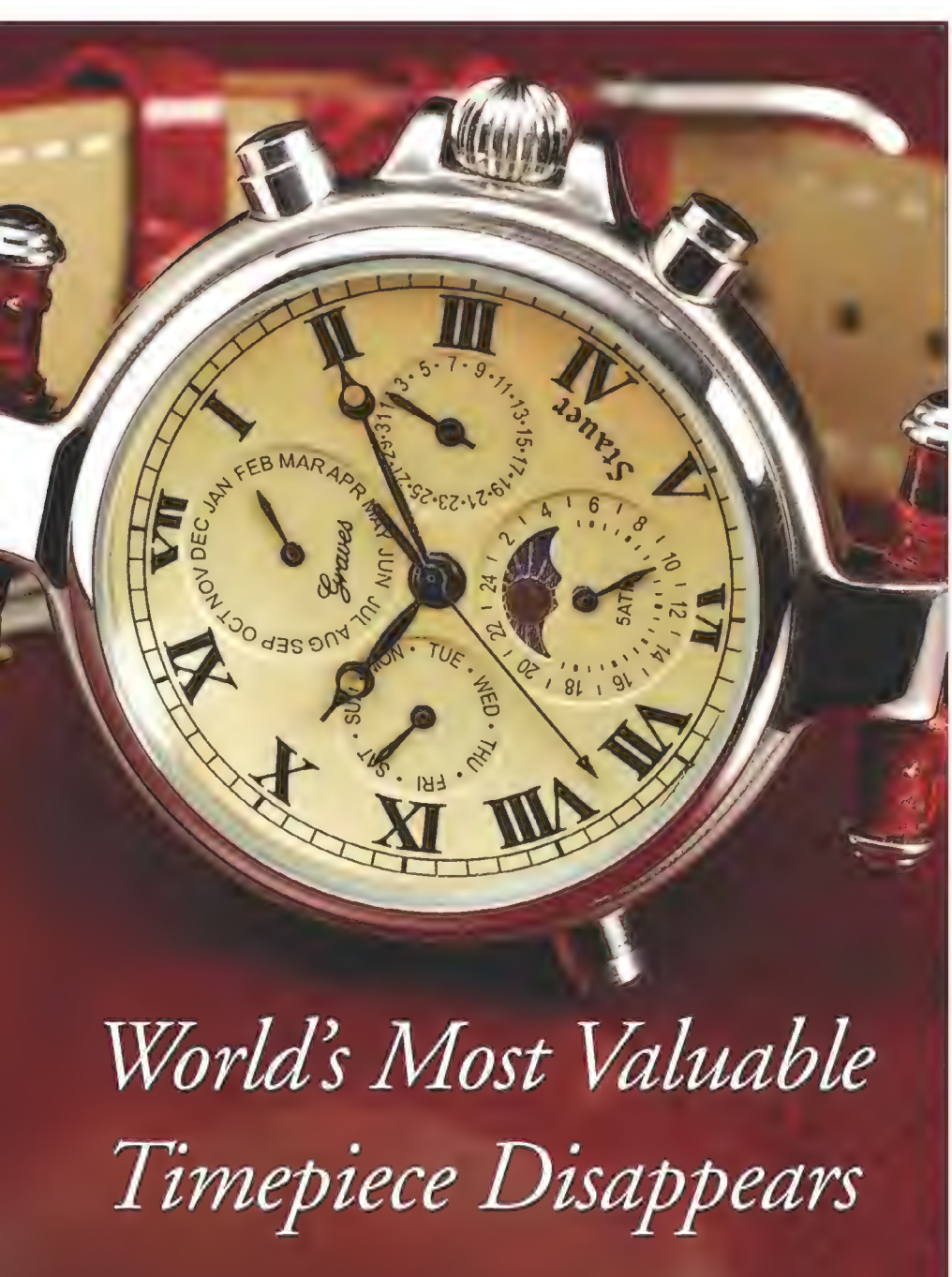

World's Most Valuable Timepiece Disappears

In 1933, the single most important watch ever built was engineered for a quiet millionaire collector named Henry Graves. Recently this ultra-rare innovation was auctioned off for the record price of $11,030,000 by Sotheby's to a secretive anonymous collector. Now the watch is locked away in a private vault in an unknown location. We believe that a classic like this should be available to true watch afficionados, so Stauer replicated the exact Graves design in the limited edition Graves™ '33.

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An evolution expert responds:

BENOÎT DE MAILLET did discuss evolutionary ideas, as did scores of other precursors. But it is inappropriate to bring Carolus Linnaeus in line with Darwin. Linnaeus considered species absolutely unchangeable. The reader confuses Linnaeus' concept of struggle with Darwin's concept of struggle for survival that leads to selection of favorable variation. Darwin was the first to present what he aptly referred to as "one long argument" with detailed documentation on and analysis of the role of variation and natural selection.

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TEAM PHOTOGRAPHY

HIS PHOTOGRAPHS are staged for a Hollywood effect ["Gregory Crewdson's Epic Effects"], which detracts from their beauty. But I am more concerned there are too many minds contributing to the end product. A Hollywood film needs a crew—but an art photograph? Think of a poet who employs a staff of experts in metaphor, meter, alliteration and lineation to commit an idea to paper. Individual creativity lies in execution as well as in concept. Crewdson appears to have forfeited the former.

ANNE HARDING WOODWORTH
WASHINGTON, D.C.

CARBON SCRUBBERS

WALLACE BROECKER'S suggestion [Interview] that we need to build carbon scrubbers to minimize global warming is apocryphal. Carbon scrubbers have been around for millions of years. Most people call them "trees." Trees are cheap, natural and fix large amounts of carbon during photosynthesis. A better solution than building mechanical scrubbers would be to give third-world nations an economic incentive to stop deforestation and to let tropical rain forest biomass fix carbon in a safe, ecologically friendly way.

ADRIANA LUSTIG
LOS ALTOS, CALIFORNIA

LUNAR LOST AND FOUND

THE NEW MEXICO State University Lunar Legacy Web site incorrectly listed Apollo 11 astronaut Buzz Aldrin's spacesuit among the items left on the moon. The article "Space Race II" repeated this error. While life support systems, boots and other personal equipment were indeed left behind, Aldrin's suit came back. In fact, it is currently on display in Gallery 210, "Apollo to the Moon," at the National Air and Space Museum—though not indefinitely, as this fragile artifact will eventually require storage in an environmentally controlled area.

AMANDA YOUNG
MUSEUM SPECIALIST
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WILD THINGS

LIFE AS WE KNOW IT

BY AMANDA BENSEN, T.A. FRAIL, MEGAN GAMBINO, JESSE RHODES, AND SARAH ZIELINSKI

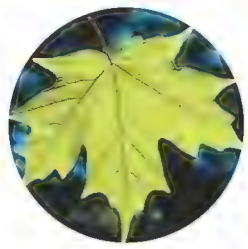
DIE, ZOMBIE, DIE

The strange thing about a Brazilian wasp isn't that it injects its eggs into a caterpillar, where they turn into larvae, feed on the host's bodily fluids and hatch through its skin. A lot of parasites do that. What's unique, according to a study from the Netherlands, is that the larvae compel the dying caterpillar (right) to swing its head violently after they emerge, possibly scaring predatory bugs away.

Observed

NAME: Arthroleptidae, a family of frogs living in sub-Saharan Africa.
AT REST: These frogs have smooth and shiny hind feet.
IN DISTRESS: They sprout claws from beneath the skin on their toes (above).
UNDER SCRUTINY: No other vertebrate has claws like these, according to a new study from Harvard. They are composed not of keratin, the stuff of fingernails, but of bone. And they have to pierce their owner's skin before they can pierce anything else. The researchers figured out the anatomy that allows the claws to spring forth, but they could only speculate about how the claws retract—and how this frog's skin heals after it uses its claws.

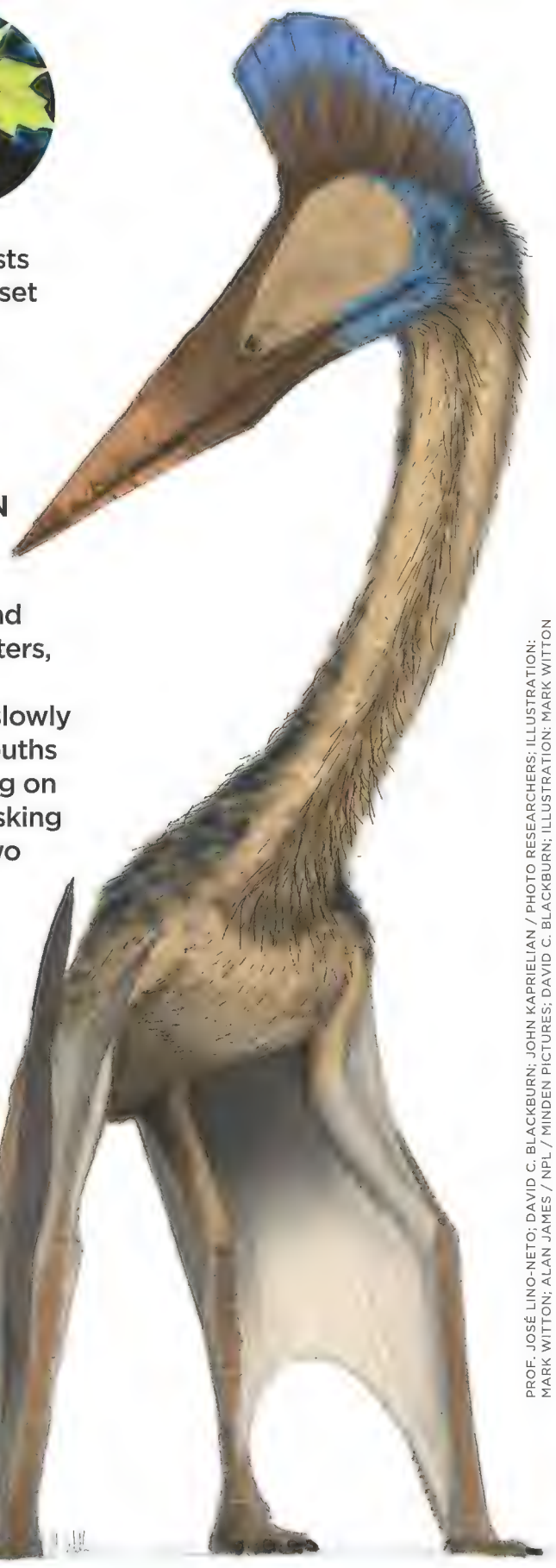
CLIMATE CONTROL



Even if it's cold or hot outside, it's just right inside leaves. A University of Pennsylvania study of oxygen atoms in 39 tree species, growing from northern Canada to Puerto Rico, suggests that leaves have an internal thermostat set at 70.5 degrees Fahrenheit. They may alter evaporation rates or their angle to the sun to stay near this temperature, which is ideal for photosynthesis.

WIDE OPEN

Basking sharks are typically found in coastal waters, where they meander so slowly with their mouths agape feeding on plankton that they appear to be just basking in the sun. But scientists who tagged two sharks near the Isle of Man found that one swam to Newfoundland, traveling almost 6,000 miles and diving deeper than 4,000 feet. The shark may have been seeking food. So much for being aimless.



PROF. JOSÉ LINO-NETO; DAVID C. BLACKBURN; JOHN KAPRIELIAN / PHOTO RESEARCHERS; ILLUSTRATION: MARK WITTON; ALAN JAMES / NPL / MINDEN PICTURES; DAVID C. BLACKBURN; ILLUSTRATION: MARK WITTON

WHY PTEROSAURS ARE NOT LIKE SEA GULLS

How did a giant pterosaur called an azhdarchid (right) capture prey? Not while flying, according to a University of Portsmouth, England, analysis of fossils and tracks. Azhdarchid's padded feet, short wings and stiff neck indicate it didn't feed aloft as today's seabirds do. It may have walked, balanced on bent wings, to pursue small animals (not including the bearded guy at left, who's just for scale).

Watch a zombie caterpillar at Smithsonian.com/WildThings

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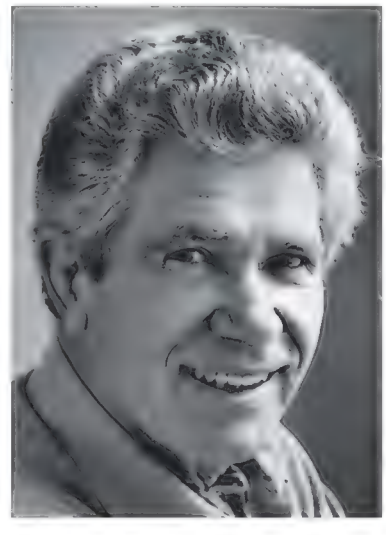
Taking a Stand

For 40 years, Olympians Tommie Smith and John Carlos have lived with the consequences of their fateful protest **BY DAVID DAVIS**

WHEN THE MEDALS were awarded for the men's 200-meter sprint at the 1968 Olympic Games, *Life* magazine photographer John Dominis was only about 20 feet away from the podium. "I didn't think it was a big news event," Dominis says. "I was expecting a normal ceremony. I hardly noticed what was happening when I was shooting."

Indeed, the ceremony that October 16 "actually passed without much general notice in the packed Olympic Stadium," *New York Times* correspondent Joseph M. Sheehan reported from Mexico City. But by the time Sheehan's observation appeared in print three days later, the event had become front-page news: for politicizing the Games, U.S. Olympic officials, under pressure from the International Olympic Committee, had suspended medalists Tommie Smith and John Carlos and sent them packing.



Smith and Carlos, winners of the gold and bronze medals, respectively, in the event, had come to the ceremony dressed to protest: wearing black socks and no shoes to symbolize African-American poverty, a black glove to express African-American strength and unity. (Smith also wore a scarf, and Carlos beads, in memory of lynching victims.) As the national anthem played and an international TV audience watched, each man bowed his head and raised a fist. After the two were banished, images of their gesture entered the iconography of athletic protest.

"It was a polarizing moment because it was seen as an example of black power radicalism," says Doug Hartmann, a University of Minnesota sociologist and the author of *Race, Culture, and the Revolt of the Black Athlete: The 1968 Olympic Protests and Their Aftermath*. "Mainstream America hated what they did."

The United States was already deeply divided over the Vietnam War and the civil rights movement, and the serial traumas of 1968—mounting antiwar protests, the assassinations of Martin Luther King Jr. and Robert F. Kennedy, the beating of protesters during the Democratic National Convention by Chicago police—put those rifts into high relief. Before the Olympics, many African-American athletes had talked of joining a boycott of the Games to protest racial inequities in the United States. But the boycott, organized by sociologist Harry Edwards, never came off.

As students at San Jose State University, where Edwards was teaching, Smith and Carlos took part in that conversation. Carlos, born and raised in Harlem, was "an extreme extrovert with a challenging personality," says Edwards, now emeritus professor of sociology at the University of California at Berkeley. Smith, the son of sharecroppers who grew up in rural Texas and California, was "a much softer, private person." When they raised their fists on the medals stand, they were acting on their own.

Among the Games athletes, opinions were divided. Australia's Peter Norman, the winner of the silver medal in the 200-meter sprint, mounted the podium wearing a badge supporting Edwards' organization. Heavyweight boxer George Foreman—who would win a gold medal and wave an American flag in the ring—dismissed the protest, saying, "That's for college kids." The four women runners on the U.S. 400-meter relay team dedicated their victory to the exiled sprinters. A representative of the USSR was quoted as saying, perhaps inevitably, "The Soviet Union never has used the Olympic Games for propaganda purposes."

Smith and Carlos returned home to a wave of opprobrium—they were "black-skinned storm troopers," in the words of Brent Musburger, who would gain fame as a TV sportscaster but was then a columnist for the *Chicago American* newspaper—and anonymous death threats. The

Smith (center) and Carlos (right) raised their arms and Norman wore a badge on his chest in support. Dominis (above: in 2008) says that at the time, "I didn't think it was a big news event."

EVELYN FLORET; P. 13 JOHN DOMINIS / TIME LIFE PICTURES / GETTY IMAGES

USA
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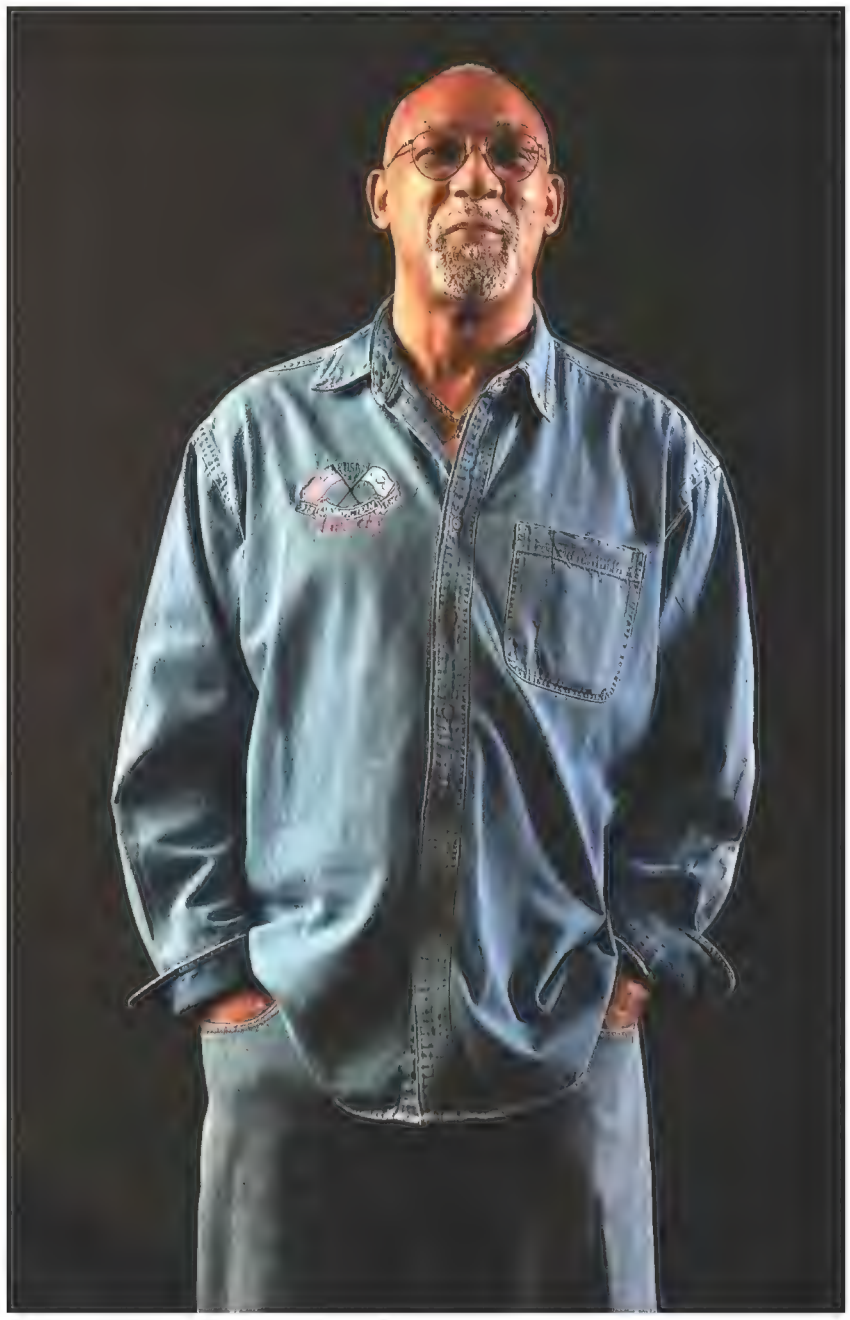
"One minute everything was sunny and happy," Carlos says, "the next minute was chaos and crazy."



Carlos (left) was "an extreme extrovert," says an associate, while Smith (right) was "a much softer, private person." Winning the Olympic 200-meter final (below) was "a moment of accomplished ecstasy," says Smith (number 307); Carlos (259) finished third.

pressure, Carlos says, was a factor in his then-wife's suicide in 1977. "One minute everything was sunny and happy, the next minute was chaos and crazy," he says. Smith recalls, "I had no job and no education, and I was married with a 7-month-old son."

Both men played professional football briefly. Then Carlos worked at a series of dead-end jobs before becoming a counselor at Palm Springs High School, where he has been for the past 20 years. Now 63 and remarried, he has four living children (a stepson died in 1998). Smith earned a bachelor's degree in social science from San Jose State in 1969 and a master's in sociology from the Goddard-Cambridge Graduate Program in Social Change in Boston in 1976. After teaching and coaching at Oberlin College in Ohio, he settled in Southern California, where he taught sociology and health and coached track at Santa Monica College. Now 64 and retired, he lives with his third wife, Delois, outside Atlanta. He has nine children and stepchildren.

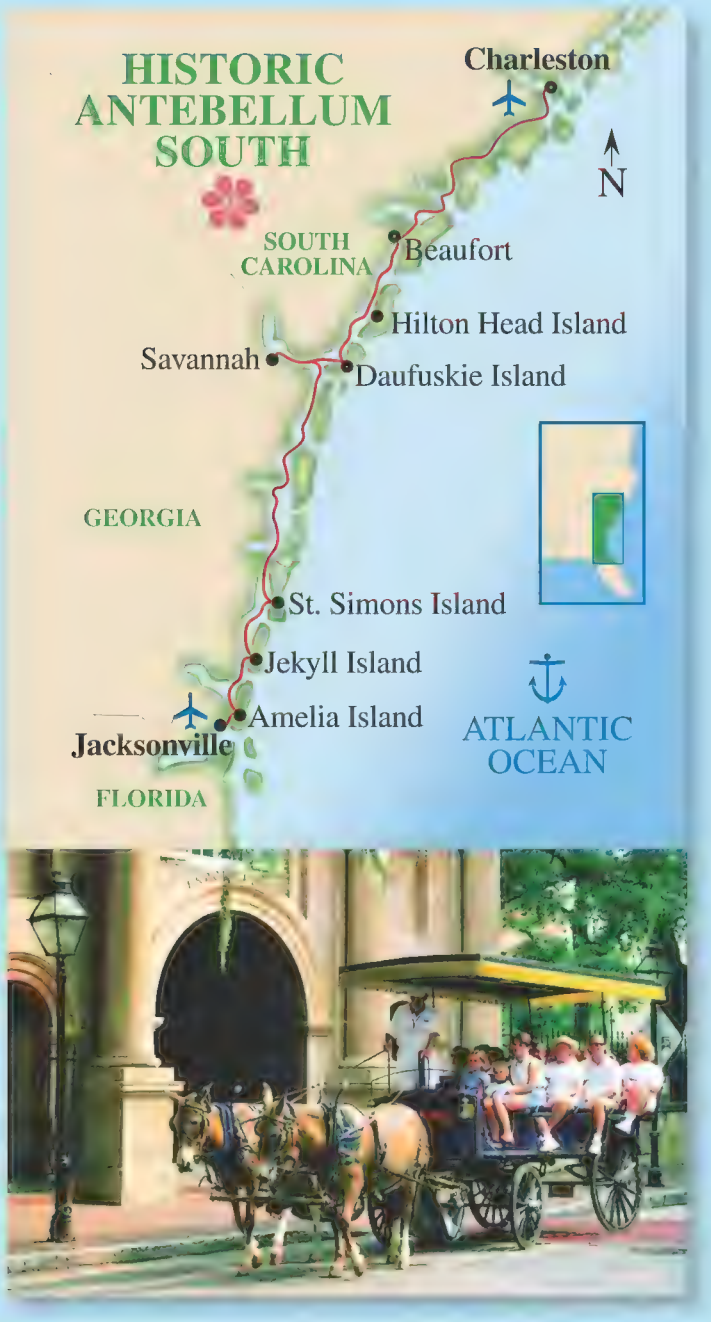
The two athletes share what Smith calls a "strained and strange" relationship. Carlos says he actually let Smith pass him in 1968 because "Tommie Smith would have never put his fist in the sky had I won that race." Smith, who won the race in a world-record 19.83 seconds, dismisses that claim as nonsense.

But both men insist they have no regrets about 1968. "I went up there as a dignified black man and said: 'What's going on is wrong,' " Carlos says. Their protest, Smith says, "was a cry for freedom and for human rights. We had to be seen because we couldn't be heard."

DAVID DAVIS *is a contributing sportswriter at* Los Angeles *magazine.*

MICHAEL STEELE / GETTY IMAGES (2); AGENCE FRANCE PRESSE / GETTY IMAGES

SMOOTH WATERS
SOUTHERN CHARM



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Jamar Roberts and Amos J. Machanic Jr. help Olivia Bowman defy gravity at the Ailey studio in 2007.

The Soul Man of Modern Dance

WASHINGTON, D.C. On March 30, 1958, an ensemble of nine African-American dancers cobbled mostly from Broadway shows debuted a work at New York City's Young Men's Hebrew Association, a low-cost venue for up-and-coming artists. Choreographed by 27-year-old dancer Alvin Ailey, *Blues Suite* echoed the bawdy music halls of his native Texas. It redefined modern dance, adding energy, robustness and physicality to traditional restrained moves. Two years later, Ailey unveiled *Revelations*, a three-part work set to the spirituals he remembered from Southern black churches. Borrowing from ballet, jazz and ethnic dance, Ailey created his own style, recruiting dancers capable of everything from ballet arabesques to acrobatic contortions. *Revelations* would become the signature piece of the New York City-based Alvin Ailey American Dance Theater, which has performed for some 21 million people worldwide.

Alvin Ailey, 1955

A new Library of Congress exhibition marking the company's 50th anniversary includes photographs, costume sketches, performance memorabilia and a short film highlighting key performances. Most of the documents are culled from the library's 30,000-item Alvin Ailey Dance Foundation Archive, acquired in 2006 and accessible to the public. After the show closes on September 6, it travels to the Walt Disney Concert Hall in Los Angeles for exhibit October 4 to April 6, 2009.

The dance company itself will offer free performances and classes this August in several New York City neighborhoods. That gesture would have delighted Ailey, who died in 1989 at age 58 and whose troupe is now under the direction of the former principal dancer Judith Jamison. After all, Ailey once said "Dance came from the people" and "it should always be delivered back to the people." BY MEGAN GAMBINO

Watch a video of Ailey dancers and listen to slack-key music at Smithsonian.com/points

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Kerouac Slept Here

NESTLED AMONG the dunes of the Cape Cod National Seashore are 19 rustic huts that have neither running water nor electricity but are as sought after as any luxury beach property. Over the decades the mostly one-room shingled buildings, built in the early 1900s for the Life-Saving Service, have welcomed the likes of Norman Mailer, Jack Kerouac, Jackson Pollock and Mark Rothko. The dune shacks became a popular retreat after Eugene O'Neill stayed in one in 1919. "A grand place to be alone and undisturbed," the playwright wrote to a friend. Interest has steadily increased to more than 500 applications a year for the six shacks that are not leased long-term. The rentals come equipped with a bed, table, propane fridge, camp stove, a tool kit and composting toilet. Guests must haul their own water from a nearby well. Mice visit regularly.

The objective, of course, is to wrestle with one's muse, face off with solitude and the inner self—and perhaps turn out a prize-winning work. Deadlines for lotteries for one- to three-week stays, which are managed by two nonprofit organizations, are January 1 and February 15, 2009. For details call 508-413-9239 or visit www.thecompact.org.

BY GREGORY B. GALLAGHER

DRESSED IN A FLORAL SHIRT and black cowboy hat, Led Kaapana dazzles the audience at a slack-key guitar festival with fancy fretwork and improvised riffs. He delivers the sweet bell-like tones of a music genre that has gone from backyard luaus to winning four Grammys as it spread to the mainland and abroad. It is believed that slack key began in the 1830s after Spanish and Mexican cowboys came to island ranches to help manage cattle. Native musicians adapted the newcomers' guitars to traditional Hawaiian chants and falsetto singing by retuning the strings (usually loosening them) and creating fingering to heighten the contrast of high and low sounds. Slack key can flow gently like water lapping the shore, or roar like big surfing waves. The Honolulu festival, now in its 26th year, takes place August 17, followed by concerts in Kona, on the Big Island of Hawaii, on August 31 and on Kauai, November 16. BY CONSTANCE HALE

Playing Fast and Loose

Dark Matters COUDERSPORT, PENNSYLVANIA

WITH ITS REMOTE mountaintop location, Cherry Springs State Park is a mecca for stargazers. In the north-central part of the state, it is a protected skywatching site, meaning white lights are prohibited. Its dark velvety sky is ideal for viewing the Perseids, a spectacular annual meteor shower in mid-August. BY JOE RAO

MILTON LAU; NATIONAL PARK SERVICE; JERRY LODRIGUSS / WWW.ASTROPIX.COM

Mystery in Vietnam

The discovery of the saola alerted scientists to the strange diversity of Southeast Asia's threatened forests

BY RICHARD STONE

A **LANDSLIDE HAS BLOCKED** the cliff-hugging road into the Pu Mat National Park in northwestern Vietnam. To go farther, we must abandon our car and wade across a shallow river. My wife, Mutsumi, a photojournalist, and I roll up our jeans to the knee and look uncertainly at our two young boys. Do Tuoc, a 63-year-old forest ecologist, reads our minds. "I'll take the bigger boy," he says, hoisting our 6-year-old onto his shoulders.

Before I can come to my senses and protest, Tuoc plunges into the current, sure-footed, and reaches the opposite bank safely. I wade out with our 3-year-old clinging to my neck. I stumble like a newborn giraffe on the slippery rocks of the riverbed. My jeans are soaked. My son, asphyxiating me, crows with joy. Both boys want to do it again.

I shouldn't have been surprised by Tuoc's nimbleness: he knows this primeval wilderness better, perhaps, than any other scientist. It was near here in 1992 that Tuoc discovered the first large mammal new to science in more than half a century, a curious cousin of cattle called the saola. The sensational debut showed that our planet can still keep a fairly big secret, and it offered a reprieve from the barrage of bad news about the state of the environment.

No one knows how many saola (top: in captivity; a stamp) are left.

If only humans had reciprocated and offered the saola a reprieve. A decade after coming to light, the unusual ungulate is skidding toward extinction. Its habitat in Vietnam and Laos is dis-

WORLD WILDLIFE FUND / AP IMAGES; WORLD WILDLIFE FUND

The first large mammal new to science in half a century showed that our planet can still keep a big secret.

appearing as human settlements eat into the forest, and it is inadvertently being killed by hunters. Saola appear to be particularly vulnerable to wire snares, introduced in the mid-1990s to snag Asiatic black bears and Malayan sun bears, whose gallbladders are used in traditional Chinese medicine. For the saola, "the situation is desperate," says Barney Long, a World Wildlife Fund conservation biologist, who is working with local scientists to protect forests in central Vietnam inhabited by saola. The Vietnamese government created Pu Mat and nearby Vu Quang national parks in response to the saola discovery, and this past fall designated two more nature reserves in the saola's dwindling range and banned all hunting in critical saola habitat. Neighboring Laos, the only other country in which the saola has been spotted, has pledged similar action. But no one knows whether these eleventh-hour efforts will succeed.

Do Tuoc (in Pu Mat National Park, with plants that saola are thought to eat) says, "If we leave the saola alone, I think—no, I *hope*—it will survive."

That's because the saola is so rare that not even Tuoc has spied one in the wild. Estimates of their numbers are based on interviews with villagers who have glimpsed the animal, and on trophies. Tuoc, who works for the Forest Inventory and Planning Institute in Hanoi, first beheld a partial saola skull mounted in a hunter's home in Vu Quang. He knew he was seeing something extraordinary. DNA tests confirmed that the saola was a previously unknown species, the first large mammal discovered since the kouprey, a Southeast Asian forest ox identified in 1937. The saola's horns, one to two feet in length and slightly diverging, inspired its name, which means "spinning wheel posts."

Tuoc calls himself "very lucky" to have discovered the saola—and to be alive. Forty years ago, his older brother volunteered in the Vietnam People's Navy, which ran supplies to forces in the south on a sea version of the Ho Chi Minh Trail. His brother's service exempted Tuoc from the military and allowed him to focus on science. With his keen powers of observation, he has discovered two other species in addition to the saola.

The best guess is that a couple of hundred saolas are left in Vietnam, Long says. "Very little is known about the saola. We don't know exactly where it occurs, or how many there are. There's a big question mark surrounding it," says Laos-based William Robichaud, who is leading a working group of the International Union for Conservation of Nature that met in June to draft a strategy for protecting saola. "The last incontrovertible evidence we have—a photograph from a camera trap—was in 1999," says Robichaud.

Since February, Robichaud and his staff have placed about 20 camera traps in Laos' Nakai-Nam Theun National Protected Area—historical saola habitat, according to hunters' sightings. But neither the cameras nor interviews with locals have yielded evidence of saola activity. "Villagers seem unsure if it's still hanging on or not," he says.

Robichaud is one of the few scientists who have observed a live saola. In early 1996, an adult female was captured and sold to a zoo in central Laos. "She was a remarkable animal," he says. Nicknamed "Martha," she stood about waist high, her 18-inch horns sweeping back over her neck. Although the saola's closest relatives are cows and bison, it resembles a diminutive antelope. It has coarse, chestnut-brown hair and a thick, white streak above its eyes. Its anatomical claim to fame is massive scent glands bulging from its cheeks. Martha would flare a fleshy flap covering a gland and dab a pungent green musk on rocks to mark her territory.

Robichaud says he was most fascinated by Martha's calmness. A few days

MUTSUMI STONE; MAP: JOHN TOMANIO

We tear uphill on a curvy road faster than this anxious parent would like. At the end, we hike into the misty hills.

after her arrival at the zoo, she ate from a keeper's hand and allowed people to stroke her. "The saola was tamer and more approachable than any domestic livestock I've ever been around," he says. "You can't pet a village pig or cow." The only thing sure to spook a saola is a dog: one whiff of a canine and it crouches low, snorting and tilting its head forward as if preparing to spear the enemy. (Saolas are presumably preyed upon by dholes, or Asiatic wild dogs, common predators in saola territory.) Remove the threat, though, and the saola regains the Zen-like composure that in Laos has earned it the nickname "the polite animal."

Martha's equanimity around people may have been genuine, but she died just 18 days after her capture. It was then that zookeepers discovered that she had been pregnant. But they could not determine her cause of death. The handful of other saolas that have been taken into captivity also perished quickly. In June 1993, hunters turned over two young saola to Tuoc and his colleagues in Hanoi. Within months, the pair succumbed to infections.

The saola's baffling fragility underscores how little is known about its biology or evolutionary history. Robichaud and conservation biologist Robert Timmins have proposed that saola were once widespread in the wet evergreen forests that covered Southeast Asia until several million years ago. These forests receded during cool, dry ice ages, leaving just a few patches suitable for saola. "If we leave the saola alone," says Tuoc, "I think—no, I *hope*—it will survive."

Other scientists argue for hands-on assistance. Pierre Comizzoli of the Smithsonian's Center for Species Survival says a captive breeding program is the only option left to save the saola from extinction. He teamed up with scientists from the Vietnamese Academy of Science and Technology in Hanoi on a survey late last year to find possible locations for a breeding site.

U.S. and Vietnamese scientists are surveying historic saola habitat (the Annamite Mountains on the Laos border) for possible captive breeding sites.

"It's a sensitive topic," he acknowledges. "But captive breeding doesn't mean that we are going to put saolas in cages, or do industrial production of saolas." Instead, he envisions putting an electric fence around a select swath of saola habitat, perhaps half an acre. "They would have access to their natural environment and could feed themselves, and at the same time we could start to study them," says Comizzoli, adding that something as simple as fresh dung would be "fantastic" for research purposes.

After fording the river, Tuoc and my family and I hike to a ranger station. The next leg of our journey is on motorcycles. Their make, Minsk, is emblazoned in Cyrillic on the gas tank. Our sons, sandwiched between my wife and a ranger, have never ridden a motorcycle before, and they squeal with delight. For several miles, we tear uphill on an empty, curvy road faster than this anxious parent would like. At the end of the road, we hike into the misty hills on our quest to spot a saola.

Preserving this habitat will help a host of other rare creatures, including the two other new mammals in Vietnam that Tuoc helped uncover, both primitive kinds of deer: the large-antlered muntjac, in 1994, and the diminutive Truong Son muntjac, in 1997. Strange beasts continue to emerge from these forests, including the kha-nyou, a rodent identified in 2006 as a species thought to have been extinct for 11 million years. "If we lose the saola," says Long, "it will be a symbol of our failure to protect this unique ecosystem."

At Pu Mat, the late morning sun is burning off the mist. With the spry Tuoc leading the way, we clamber up a slick path until we reach Kem Waterfall. Tuoc grabs a handful of broad, dark-green leaves near the entrancing falls. "Saola like to eat these," he says. "At least, we have seen bite marks." These Araceae leaves, I realize with a pang, may be as close as I ever get to a saola. Tuoc, too, has no delusions. "Maybe I'll never see one in the wild," he says.

RICHARD STONE *is the Asia editor for* Science *magazine. He lives in Beijing.*

PIERRE COMIZZOLI

INTERVIEW

PAUL POLAK

SOCIAL ENTREPRENEUR, GOLDEN, COLORADO

His new book advocates helping the world's poorest people one tool at a time **BY ABIGAIL TUCKER** PHOTOGRAPH BY RAY NG

PAUL POLAK HAS BEEN HELPING *people escape poverty in Bangladesh, Zimbabwe and elsewhere for 27 years. In* Out of Poverty: What Works When Traditional Approaches Fail*, the 74-year-old former psychiatrist and founder of International Development Enterprises—a nonprofit that develops low-cost equipment for farmers—argues that simple tools such as a $25 water pump can do more than large cash donations to aid many of the world's "dollar-a-day" people, of which there are an estimated 1.2 billion.*

WHY DID YOU SWITCH FROM PSYCHIATRY TO POVERTY? In working with mentally ill people in Denver, I learned that their poverty was a bigger contributor to their state of mind than psychiatric illness. We found them housing and access to employment. Those things helped so much. But I was curious about people who lived on $30 a month or less, so I went to Bangladesh.

YOU TELL THE STORY OF A FARMER IN NEPAL. Yes, Krishna Bahadur Thapa invested $26 to buy a 250-square-meter drip [irrigation] kit. He learned horticulture, and he worked hard to raise off-season cucumber and cauliflower, and all of a sudden he made $256 in one season when he was used to making only $50 to $100 a year. He went from that first tiny plot to a whole acre of irrigated fruits and vegetables. He bought himself a buffalo and made almost $700 selling milk. Then he bought two-thirds of an acre of oranges. He raised goats and sold the kids for meat. Farmers improve in bits and pieces. By that method you can get as big as you want.

YOU SAY WE CAN'T "DONATE" PEOPLE OUT OF POVERTY. Right. Poor people have to make an investment of their own time and money to move out of poverty. You can help them by removing constraints. Many of the current approaches to poverty assume you have to give them a large number of things. But there are no sustainable impacts once the money stops.

YOU HAVE GREAT HOPES FOR A $100 HOUSE. Virtually all "dollar-a-day" people in rural areas own their own houses. But the walls are made of mud and wattle, usually there's a thatched roof, and the floor is a mixture of dung and clay. The house has no value. You can't sell it and, even more critically, you can't go to a bank and use it [as collateral] for a loan. But for $100 you can build a 20-square-meter house—a skeleton of eight beams and a good roof that they can add bricks or cinder blocks to. Then they can go to the bank and borrow against it.

WHAT'S AN EXAMPLE OF A TOOL THAT MIGHT HELP AMERICA'S URBAN POOR? One thing I learned in Colorado is that homeless people need a secure place to store their stuff. The railroad station had 75-cent lockers, and that's where [a homeless man named] Joe kept his stuff. Well, there were thousands of homeless people in Denver. It would have been a fairly simple matter for someone to finance a loan for a locker facility.

YOUR FAMILY LEFT CZECHOSLOVAKIA TO ESCAPE THE NAZIS WHEN YOU WERE A CHILD. My father sold everything at 10 cents on the dollar to accumulate 2,000 bucks to get a visa to Canada. We arrived as refugees. We worked for a while as migrant farm laborers, and then three of us—three families—bought a farm. My dad worked hauling molten pig iron in a factory, and in the evenings and on weekends he had a landscaping business, and then he started a nursery and made a very good living. I learned about seeing things with open eyes, and about being an entrepreneur.

THIS MONTH IN HISTORY

AUGUST ANNIVERSARIES
MOMENTOUS OR MERELY MEMORABLE

BY ALISON McLEAN

125 YEARS AGO
"THERE IS ONLY ONE CHANEL"

Gabrielle "Coco" Chanel is born August 19, 1883, in Saumur, France. Orphaned as a child, she opens a hat shop in 1913. Her elegant and comfortable clothing designs—she introduces the "little black dress" in 1926—and signature perfume, Chanel No. 5, reflect her belief that "fashion fades . . . style remains." Chanel dies in 1971, at age 87.

170 YEARS AGO
WATERWORLD

The six ships of the U.S. Exploring Expedition, led by Lt. Charles Wilkes, set sail from Virginia, August 18, 1838, to explore the Pacific. In four years the small fleet will chart 1,500 miles of Antarctic coast as well as some 280 Pacific islands, 800 miles of Oregon country coast and the Columbia River. The 40 tons of plant and animal specimens, artifacts and fossils they return with form, in 1858, a core collection of the national museum at the Smithsonian Institution.

120 YEARS AGO
RIPPED FROM THE HEADLINES

Mary Ann Nichols, 43, is found murdered August 31, 1888, in London's poor Whitechapel district, her throat cut. In a frenzy fueled by the growth of cheap, mass-produced newspapers, her death, and those of at least four other women killed and mutilated nearby that year, make "Jack the Ripper," as the killer is known, Britain's most notorious criminal. More than 100 books—fingering suspects from immigrant lunatics to the Prince of Wales—will be written about the case, which remains unsolved.

60 YEARS AGO SPY VS. SPY

When journalist Whittaker Chambers accuses former State Department official Alger Hiss (right) of being a Communist, in August 1948, Hiss denies it before the House Un-American Activities Committee. Chambers' further accusations of espionage lead to Hiss' indictment. Two sensational trials—featuring microfilm hidden in a pumpkin and questions about Chambers' sanity—end in Hiss' conviction for perjury in 1950 and increased anti-Communist fervor. Hiss dies in 1996 at age 92, still maintaining his innocence.

150 YEARS AGO DEBATABLE PROPOSITION

Republican Abraham Lincoln takes on Democrat Stephen Douglas in Ottawa, Illinois, August 21, 1858, in the first of seven debates in the Illinois race for U.S. Senate. At issue is slavery, a "monstrous injustice" in Lincoln's view, and in Douglas' a matter for states—and new territories—to settle for themselves. Douglas is elected, but history rewards Lincoln, who is propelled by the debates to the national stage; in 1860, Lincoln wins the presidency, defeating Douglas.

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DSS *VINCENNES* (OIL ON CANVAS) ATTRIBUTED TO CAPTAIN CHARLES WILKES (1798-1877) / © PEABODY ESSEX MUSEUM, SALEM, MASSACHUSETTS, USA / BRIDGEMAN ART LIBRARY; LIPNITZKI / ROGER VIOLLET / GETTY IMAGES; TOM MORGAN / MARY EVANS PICTURE LIBRARY; BETTMANN / CORBIS; NORTH WIND PICTURE ARCHIVES

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DO NOT SWALLOW SPIRIVA CAPSULES

INDICATIONS AND USAGE
SPIRIVA HandiHaler (tiotropium bromide inhalation powder) is indicated for the long-term, once-daily, maintenance treatment of bronchospasm associated with chronic obstructive pulmonary disease (COPD), including chronic bronchitis and emphysema.

CONTRAINDICATIONS
SPIRIVA HandiHaler (tiotropium bromide inhalation powder) is contraindicated in patients with a history of hypersensitivity to atropine or its derivatives, including ipratropium, or to any component of this product.

WARNINGS
SPIRIVA HandiHaler (tiotropium bromide inhalation powder) is intended as a once-daily maintenance treatment for COPD and is not indicated for the initial treatment of acute episodes of bronchospasm, i.e., rescue therapy.

Immediate hypersensitivity reactions, including angioedema, may occur after administration of SPIRIVA. If such a reaction occurs, therapy with SPIRIVA should be stopped at once and alternative treatments should be considered.

Inhaled medicines, including SPIRIVA, may cause paradoxical bronchospasm. If this occurs, treatment with SPIRIVA should be stopped and other treatments considered.

PRECAUTIONS
General

As an anticholinergic drug, SPIRIVA (tiotropium bromide inhalation powder) may potentially worsen symptoms and signs associated with narrow-angle glaucoma, prostatic hyperplasia or bladder-neck obstruction and should be used with caution in patients with any of these conditions.

As a predominantly renally excreted drug, patients with moderate to severe renal impairment (creatinine clearance of ≤50 mL/min) treated with SPIRIVA should be monitored closely (see **CLINICAL PHARMACOLOGY, Pharmacokinetics, Special Populations,** *Renally-impaired Patients*).

Information for Patients

It is important for patients to understand how to correctly administer SPIRIVA capsules using the HandiHaler inhalation device (see **Patient's Instructions for Use**). SPIRIVA capsules should only be administered via the HandiHaler device and the HandiHaler device should not be used for administering other medications. **The contents of SPIRIVA capsules are for oral inhalation only and must not be swallowed.**

Capsules should always be stored in sealed blisters. Remove only one capsule immediately before use, or its effectiveness may be reduced. Additional capsules that are exposed to air (i.e., not intended for immediate use) should be discarded.

Eye pain or discomfort, blurred vision, visual halos or colored images in association with red eyes from conjunctival congestion and corneal edema may be signs of acute narrow-angle glaucoma. Should any of these signs and symptoms develop, consult a physician immediately. Miotic eye drops alone are not considered to be effective treatment.

Care must be taken not to allow the powder to enter into the eyes as this may cause blurring of vision and pupil dilation.

SPIRIVA HandiHaler is a once-daily maintenance bronchodilator and should not be used for immediate relief of breathing problems, i.e., as a rescue medication.

Drug Interactions

SPIRIVA has been used concomitantly with other drugs commonly used in COPD without increases in adverse drug reactions. These include short-acting and long-acting sympathomimetic (beta-agonists) bronchodilators, methylxanthines, and oral and inhaled steroids. However, the co-administration of SPIRIVA with other anticholinergic-containing drugs (e.g., ipratropium) has not been studied and is therefore not recommended.

Drug/Laboratory Test Interactions

None known.

Carcinogenesis, Mutagenesis, Impairment of Fertility

No evidence of tumorigenicity was observed in a 104-week inhalation study in rats at tiotropium doses up to 0.059 mg/kg/day, in an 83-week inhalation study in female mice at doses up to 0.145 mg/kg/day, and in a 101-week inhalation study in male mice at doses up to 0.002 mg/kg/day. These doses correspond to 25, 35, and 0.5 times the Recommended Human Daily Dose (RHDD) on a mg/m^2 basis, respectively. These dose multiples may be over-estimated due to difficulties in measuring deposited doses in animal inhalation studies.

Tiotropium bromide demonstrated no evidence of mutagenicity or clastogenicity in the following assays: the bacterial gene mutation assay, the V79 Chinese hamster cell mutagenesis assay, the chromosomal aberration assays in human lymphocytes *in vitro* and mouse micronucleus formation *in vivo*, and the unscheduled DNA synthesis in primary rat hepatocytes *in vitro* assay.

In rats, decreases in the number of corpora lutea and the percentage of implants were noted at inhalation tiotropium doses of 0.078 mg/kg/day or greater (approximately 35 times the RHDD on a mg/m^2 basis). No such effects were observed at 0.009 mg/kg/day (approximately 4 times than the RHDD on a mg/m^2 basis). The fertility index, however, was not affected at inhalation doses up to 1.689 mg/kg/day (approximately 760 times the RHDD on a mg/m^2 basis). These dose multiples may be over-estimated due to difficulties in measuring deposited doses in animal inhalation studies.

Pregnancy

Pregnancy Category C.

No evidence of structural alterations was observed in rats and rabbits at inhalation tiotropium doses of up to 1.471 and 0.007 mg/kg/day, respectively. These doses correspond to approximately 660 and 6 times the recommended human daily dose (RHDD) on a mg/m^2 basis. However, in rats, fetal resorption, litter loss, decreases in the number of live pups at birth and the mean pup weights, and a delay in pup sexual maturation were observed at inhalation tiotropium doses of ≥0.078 mg/kg (approximately 35 times the RHDD on a mg/m^2 basis). In rabbits, an increase in post-implantation loss was observed at an inhalation dose of 0.4 mg/kg/day (approximately 360 times the RHDD on a mg/m^2 basis). Such effects were not observed at inhalation doses of 0.009 and up to 0.088 mg/kg/day in rats and rabbits, respectively. These doses correspond to approximately 4 and 80 times the RHDD on a mg/m^2 basis, respectively. These dose multiples may be over-estimated due to difficulties in measuring deposited doses in animal inhalation studies.

There are no adequate and well-controlled studies in pregnant women. SPIRIVA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Use in Labor and Delivery

The safety and effectiveness of SPIRIVA has not been studied during labor and delivery.

Nursing Mothers

Clinical data from nursing women exposed to tiotropium are not available. Based on lactating rodent studies, tiotropium is excreted into breast milk. It is not known whether tiotropium is excreted in human milk, but because many drugs are excreted in human milk and given these findings in rats, caution should be exercised if SPIRIVA is administered to a nursing woman.

Pediatric Use

SPIRIVA HandiHaler is approved for use in the maintenance treatment of bronchospasm associated with chronic obstructive pulmonary disease, including chronic bronchitis and emphysema. This disease does not normally occur in children. The safety and effectiveness of SPIRIVA in pediatric patients have not been established.

Geriatric Use

Of the total number of patients who received SPIRIVA in the 1-year clinical trials, 426 were <65 years, 375 were 65–74 years and 105 were ≥75 years of age. Within each age subgroup, there were no differences between the proportion of patients with adverse events in the SPIRIVA (tiotropium bromide inhalation powder) and the comparator groups for most events. Dry mouth increased with age in the SPIRIVA group (differences from placebo were 9.0%, 17.1%, and 16.2% in the aforementioned age subgroups). A higher frequency of constipation and urinary tract infections with increasing age was observed in the SPIRIVA group in the placebo-controlled studies. The differences from placebo for constipation were 0%, 1.8%, and 7.8% for each of the age groups. The differences from placebo for urinary tract infections were –0.6%, 4.6% and 4.5%. No overall differences in effectiveness were observed among these groups. Based on available data, no adjustment of SPIRIVA dosage in geriatric patients is warranted.

ADVERSE REACTIONS
Of the 2,663 patients in the four 1-year and two 6-month controlled clinical trials, 1,308 were treated with SPIRIVA at the recommended dose of 18 mcg once a day. Patients with narrow angle glaucoma, or symptomatic prostatic hypertrophy or bladder outlet obstruction were excluded from these trials.

The most commonly reported adverse drug reaction was dry mouth. Dry mouth was usually mild and often resolved during continued treatment. Other reactions reported in individual patients and consistent with possible anticholinergic effects included constipation, increased heart rate, blurred vision, glaucoma, urinary difficulty, and urinary retention.

Four multicenter, 1-year, controlled studies evaluated SPIRIVA in patients with COPD. Table 1 shows all adverse events that occurred with a frequency of ≥3% in the SPIRIVA group in the 1-year placebo-controlled trials where the rates in the SPIRIVA group exceeded placebo by ≥1%. The frequency of corresponding events in the ipratropium-controlled trials is included for comparison.

Table 1 Adverse Experience Incidence (% Patients) in One-Year-COPD Clinical Trials

Body System (Event)	Placebo-Controlled Trials SPIRIVA [n = 550]	Placebo [n = 371]	Ipratropium-Controlled Trials SPIRIVA [n = 356]	Ipratropium [n = 179]
Body as a Whole				
Accidents	13	11	5	8
Chest Pain (non-specific)	7	5	5	2
Edema, Dependent	5	4	3	5
Gastrointestinal System Disorders				
Abdominal Pain	5	3	6	6
Constipation	4	2	1	1
Dry Mouth	16	3	12	6
Dyspepsia	6	5	1	1
Vomiting	4	2	1	2
Musculoskeletal System				
Myalgia	4	3	4	3
Resistance Mechanism Disorders				
Infection	4	3	1	3
Moniliasis	4	2	3	2
Respiratory System (upper)				
Epistaxis	4	2	1	1
Pharyngitis	9	7	7	3
Rhinitis	6	5	3	2
Sinusitis	11	9	3	2
Upper Respiratory Tract Infection	41	37	43	35
Skin and Appendage Disorders				
Rash	4	2	2	2
Urinary System				
Urinary Tract Infection	7	5	4	2

Arthritis, coughing, and influenza-like symptoms occurred at a rate of ≥3% in the SPIRIVA treatment group, but were <1% in excess of the placebo group.

Other events that occurred in the SPIRIVA group at a frequency of 1–3% in the placebo-controlled trials where the rates exceeded that in the placebo group include: *Body as a Whole:* allergic reaction, leg pain; *Central and Peripheral Nervous System:* dysphonia, paresthesia; *Gastrointestinal System Disorders:* gastrointestinal disorder not otherwise specified (NOS), gastroesophageal reflux, stomatitis (including ulcerative stomatitis); *Metabolic and Nutritional Disorders:* hypercholesterolemia, hyperglycemia; *Musculoskeletal System Disorders:* skeletal pain; *Cardiac Events:* angina pectoris (including aggravated angina pectoris); *Psychiatric Disorder:* depression; *Infections:* herpes zoster; *Respiratory System Disorder (Upper):* laryngitis; *Vision Disorder:* cataract. In addition, among the adverse events observed in the clinical trials with an incidence of <1% were atrial fibrillation, supraventricular tachycardia, angioedema, and urinary retention.

In the 1-year trials, the incidence of dry mouth, constipation, and urinary tract infection increased with age (see **PRECAUTIONS, Geriatric Use**).

Two multicenter, 6-month, controlled studies evaluated SPIRIVA in patients with COPD. The adverse events and the incidence rates were similar to those seen in the 1-year controlled trials. The following adverse reactions have been identified during worldwide post-approval use of SPIRIVA: application site irritation (glossitis, mouth ulceration, and pharyngolaryngeal pain), dizziness, dysphagia, epistaxis, hoarseness, intestinal obstruction including ileus paralytic, intraocular pressure increased, oral candidiasis, palpitations, pruritus, tachycardia, throat irritation, and urticaria.

DOSAGE AND ADMINISTRATION
SPIRIVA capsules must not be swallowed as the intended effects on the lungs will not be obtained. The contents of the capsules are for oral inhalation only (see OVERDOSAGE section).

The recommended dosage of SPIRIVA HandiHaler (tiotropium bromide inhalation powder) is the inhalation of the contents of one SPIRIVA capsule, once-daily, with the HandiHaler inhalation device (see **Patient's Instructions for Use**).

No dosage adjustment is required for geriatric, hepatically-impaired, or renally-impaired patients. However, patients with moderate to severe renal impairment given SPIRIVA should be monitored closely (see **CLINICAL PHARMACOLOGY, Pharmacokinetics, Special Populations** and **PRECAUTIONS**).

HOW SUPPLIED
The following packages are available:

carton containing 5 SPIRIVA capsules (1 unit-dose blister card) and 1 HandiHaler inhalation device (NDC 0597-0075-75)

carton containing 30 SPIRIVA capsules (3 unit-dose blister cards) and 1 HandiHaler inhalation device (NDC 0597-0075-41)

carton containing 90 SPIRIVA capsules (9 unit-dose blister cards) and 1 HandiHaler inhalation device (NDC 0597-0075-47)

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Around the Mall

SCENES AND SIGHTINGS FROM THE SMITHSONIAN MUSEUMS AND BEYOND

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MEDICINE MAN

A NEW EXHIBITION AT NATURAL HISTORY PAYS HOMAGE TO BOTANIST RICHARD EVANS SCHULTES, WHO VENTURED INTO THE AMAZON TO LEARN FROM THE SHAMANS

PAGE 27

FROM THE CASTLE

Keeping Up

G. WAYNE CLOUGH

WE CAN EASILY UNDERSTAND the first part of Smithsonian benefactor James Smithson's mandate, ". . . the increase and diffusion of knowledge," as an imperative to do original research; less clear is the second part. In my online dictionary, the first definition of "diffusion" is the movement of particles from an area of higher concentration to one of lower concentration in a given volume of liquid or gas. Secondary definitions relate to the spread of cultural ideas or the process by which a new idea becomes accepted.

Mr. Smithson was a noted chemist. Could he have been using "diffusion" as an analogy for education? Smithson learned chemistry, then a new field, by studying at Oxford University with faculty trained at the University of Edinburgh, renowned for early chemistry studies. He probably knew that many of his contemporaries used the "increase and diffusion" phrase to mean, as historian Pamela Henson explains, that "research carried with it a commitment beyond the individual, that its results should be shared, enabling knowledge to ameliorate human conditions, advance societies and cross national boundaries."

Smithson: Using "diffusion" as an analogy for education?

The Smithsonian Institution has long appreciated its educational role, reflected in its many program initiatives, some of which are explained on our Web site, Smithsonianeducation.org. That role now becomes especially challenging as we work to keep up with rapid changes in society and remain relevant. Information is increasing at an exponential rate, and students and others acquire it in ways significantly different from the past—witness blogs, texting, MySpace, YouTube, multiplayer online role-playing games, iPods, podcasts, Web cams and so on.

A few years ago I chaired an initiative for the National Academy of Engineering, "The Engineer of 2020." Engineers, business and academic leaders discussed the skills—in addition to those in technology and engineering—needed in our changing world: creative thinking, adaptive planning and an appreciation of the global economy and global culture. Nobel laureate and physicist Leon Lederman has explained that we need to educate students to adapt to changes driven by new technology, to work with others across borders, to communicate complex ideas effectively to a variety of audiences and, perhaps most important, to find "measured yet creative solutions to problems which are today unimaginable."

This new educational model is good news for the Institution because our purview spans science, history, natural history and art. With our interdisciplinary lens we are well positioned to consider new means of communication and more collaborative learning styles. One of my early initiatives will be to engage my new colleagues to examine how we can best use the Institution's remarkable assets to better serve society. We will work together to broaden our understanding of the possibilities ahead.

G. WAYNE CLOUGH *is Secretary of the Smithsonian Institution.*

Smithsonian Institution

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G. Wayne Clough

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NATIONAL PORTRAIT GALLERY, SI

PHOTO FIND

WITH A ROLLEIFLEX CAMERA, A PIONEERING BOTANIST DOCUMENTED HIS FIELDWORK—AND CREATED ART.

Biographer Wade Davis (left) says Schultes approached photography (above: a shaman from Río Sucumbíos in 1942) with the "same precision as he did botany."

RICHARD EVANS SCHULTES, an explorer and botanist, spent much of his career penetrating remote reaches of the Amazon, where shamans taught him the healing properties of plants often unknown to science. In his pursuit of natural pharmacopeia, he imbibed strange brews and snorted potent snuff to personally test the effects, often donning traditional costume and participating in tribal ceremonies. By the time he died in 2001 at age 86, Schultes had documented 300 new species and cataloged the uses of 2,000 medicinal plants, from hallucinogenic vines to sources of the muscle relaxant curare.

Schultes was also a popular Harvard professor, known as the father of ethnobotany for his groundbreaking work examining the relationship between cultures and plants. He inspired a generation of Harvard students to become leaders in botany and rain forest preservation—including Mark Plotkin, president of the Amazon Conservation Team and author of the best-selling *Tales of a Shaman's Apprentice*. "Here was a guy who went off to the unknown and not only lived to tell about it, he came back with all kinds of cool stuff," Plotkin says. Students remember Schultes' nonconformity; he was known to demonstrate the use of a blowgun by shooting at a target across the classroom. He was also an avid photographer, who recorded many remarkable images on his expeditions.

But until recently, most of these remained in his files. Wade Davis, a National Geographic explorer-in-residence, unearthed the images while working on a biography of his former professor. Davis and photography editor Chris Murray collected and published many of the photographs for the first time in the 2004 book *The Lost Amazon*. An exhibition of Schultes' work is now at the Smithsonian's Museum of Natural History until October 31.

Schultes used a rugged Rolleiflex twin-lens reflex camera and filed each negative in a labeled envelope with a small print affixed to the corner. Always pragmatic, he thought of his photographs mainly as a way to document the flora and culture of the areas he visited. Still, many of his portraits and landscapes have an artist's sensibility and are "raw and alive in a remarkable way," says Davis.

That may derive from the intimate relationships Schultes developed with the rain forest's inhabitants. While most outsiders before him treated the indigenous tribes with condescension that often culminated in violence, Schultes viewed them "as his mentors," says Davis.

Or, as Plotkin explains it, "You don't get all these Indians to share their secrets unless you have some magic about you yourself."

KENNETH R. FLETCHER

DOGGED UNDERDOG U. Utah Phillips, who died May 23 at age 73, once described himself as a "ne'er-do-well, wino, tramp philosopher, typical family man, folk intellectual and conversation assassin." Phillips was widely revered for his witty blend of storytelling and song. After returning from Army service in 1950s Korea, he fell in with a group of labor activists who gave his life new direction fighting for the downtrodden. Phillips ran for the Senate in 1968 and for president in 1976 and started a homeless shelter. He performed at coffeehouses and festivals into his 70s. Hear three of his classics at Smithsonian.com/Jukebox.

K.R.F.

RICHARD EVANS SCHULTES; PETER VON PUTTKAMER, GRYPHON PRODUCTIONS / FROM THE DOCUMENTARY *PEYOTE TO LSD - A PSYCHEDELIC ODYSSEY*; CHRISTOPHER DUNN / WWW.UTAHPHILLIPS.ORG

See more of Schultes' photographs at Smithsonian.com/schultes

THE OBJECT AT HAND | Rhinestone Dress

NATIONAL MUSEUM OF AMERICAN HISTORY

ALL THAT GLITTERS

Carol Channing can't forget the night her gown got ransomed

BY OWEN EDWARDS

WHEN BROADWAY STAR CAROL CHANNING sang "Diamonds Are a Girl's Best Friend" in the 1974 musical *Lorelei*, all that glittered was not what it seemed. Designer Bob Mackie created the show's eye-catching costumes, including a bejeweled dress for the character Lorelei Lee's big number. (Channing had gotten her big break in the Anita Loos play *Gentlemen Prefer Blondes* in 1949 and starred in its revival, *Lorelei*, 25 years later.) One of Mackie's nicknames is the Rajah of Rhinestones: what sparkled so plentifully on the gown were no more diamonds than a stage set for *Hamlet* could be said to be Elsinore Castle.

The showstopper of a dress, which Channing wore for all of the production's 320 Broadway performances, now resides within the collections of the Smithsonian's National Museum of American History (NMAH). Mackie's extravaganza, with its hailstorm of stones from Czechoslovakia, weighs about 40 pounds. "The first time I took a bow in that dress," Channing told me recently, "I fell over forward and almost broke my teeth." During the production, Channing had to make a quick change between scenes. "I told Bob that getting out of that dress in one minute was almost impossible. So he said, 'Take off the sleeves.'" (Channing would wear the costume in both configurations.)

But it wasn't until late 2007 that the dress took on a life of its own. Channing was scheduled to donate the gown to NMAH at a January 2008 ceremony in North Hollywood. The event would honor distinguished women, showbiz luminaries all, who had offered items to NMAH. Angela Lansbury, for example, contributed her typewriter from television's "Murder, She Wrote." Tippi Hedren donated her script from Alfred Hitchcock's *The Birds*. And Julie Newmar, of the TV series "Batman," turned over her slinky Catwoman costume.

Channing's plan, however, was nearly derailed. In September 2007, as preparations were finalized, Channing was in Los Angeles, where the dress was to be appraised. When she and her husband, real estate entrepreneur Harry Kullijian, arrived at the Renaissance Hotel, a suitcase containing the dress was placed on a luggage carrier. When the valises didn't arrive at the room, Kullijian went down to the lobby and spotted the carrier: the dress was missing. "I let out a war whoop you wouldn't believe," Kullijian recalls.

The Los Angeles police were notified. Not long afterward, a man called Channing's room, demanding a ransom of $25,000 for the dress. No deal, Harry said. The next day, a stranger appeared at the hotel, claiming that he had found the costume in a city park. "I thought this guy was a hero," Kullijian says, "and went to the front desk to get some money to reward him."

At that point, Channing recalls, the situation began to

Channing (as Lorelei Lee, 1974) recalls taking her first bow in a dress encrusted with 40 pounds of bling: "I fell over forward and almost broke my teeth."

CAROL CHANNING PRODUCTIONS

deteriorate: "The man kept poking me in the chest and asking for money." When the police arrived, they immediately recognized Kullijian's "hero" as someone with a long arrest record. The alleged thief was taken into custody but no charges were brought for lack of evidence.

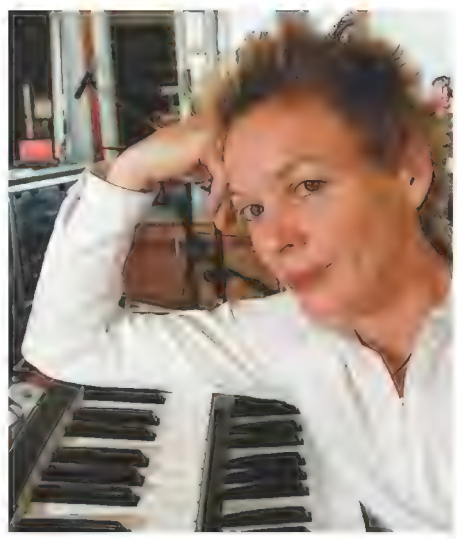
One question that has not been answered is how he (or whoever did it) happened to nab the dress in the first place. Channing's longtime agent, Harlan Boll, believes he has the answer. At the time Channing checked into the hotel, Boll recalls, a bellhop had inquired why one of her suitcases was so heavy. Channing replied, "Because the diamond dress is in there." That offhand remark, Boll thinks, could very well have set everything in motion. The thief may simply have overheard—and drawn a wrong conclusion. (It would, of course, turn out that rhinestones were not a guy's best friend.)

Channing describes the strange escapade as the tale of the "lost-and-found dress." Ultimately, during a gala ceremony at North Hollywood's landmark El Portal Theatre on the night of January 28, Channing was able to turn the dress over to the Smithsonian—right on schedule.

OWEN EDWARDS *is a freelance writer and author of the book* Elegant Solutions.

LOUIS LANZANO / AP IMAGES; BILL DOW (DRESS); ANN BATDORF / NZP, SI

After the gown turned up, Channing dubbed it the "lost-and-found dress."



Q&A

LAURIE ANDERSON's career has ranged far and wide since she emerged in the 1970s as an avant-garde performance artist and scored a hit on the pop charts in 1980. Recently, Anderson gave a talk at the Smithsonian's Reynolds Center. She spoke with the magazine's Kenneth R. Fletcher.

WHAT'S THE MESSAGE IN YOUR WORK? If I had a message, I would write it down and e-mail it to everybody. I would save a lot of paint that way. My work is more about trying to create images through words and pictures. I want to evoke a reaction more than explain anything clearly. I don't like things to be confused, but I like them to be multifaceted.

IN 2002 YOU WERE NASA'S FIRST ARTIST IN RESIDENCE, WHY YOU? Because I have a reputation for being a gear head and a wire head. It was a really great gig. I went to mission control in Pasadena, and I met the guy who figures out how to color the stars in the photos taken by the Hubble Space Telescope.

YOU'VE ALSO WORKED AT MCDONALD'S. Yeah. I began to think, "How can I escape this trap of just experiencing what I expect?" I decided maybe I would just try to put myself in places where I don't know what to do, what to say, or how to act. So, I did things like working at McDonald's and on an Amish farm, which had no technology whatsoever.

WHAT DO YOU NEED TO "ESCAPE" FROM? At heart, I'm an anthropologist. I try to jump out of my skin. I normally see the world first as an artist, second as a New Yorker and third as a woman.

Visit Smithsonian.com/anderson to read more of our interview with Laurie Anderson

MAKING HISTORY

ROLE REVERSAL Animals are usually the "guinea pigs" for human medicine, but a recent case at Smithsonian's National Zoo worked the other way around. After inventing a procedure that reverses vasectomies and performing it on about 13,000 patients, St. Louis-based urologist Sherman Silber successfully operated on a critically endangered species at the zoo. "Minnesota," a Przewalski's horse kept there since 2006, had been vasectomized to keep him from horsing around in the co-ed enclosure at his previous home. The species became extinct in their native Central Asian habitats about 40 years ago, and there are only 1,500 are alive today. When the zoo's Budhan Pukazhenthi, a reproductive specialist, realized that Minnesota's genes made him an ideal sire, he asked Silber to team up with the zoo's veterinary staff. "To maybe bring an extinct animal back from extinction was pretty thrilling," Silber says. Minnesota will be introduced to a mate this summer.

AMANDA BENSON

What's Up

VINTAGE VOYAGERS

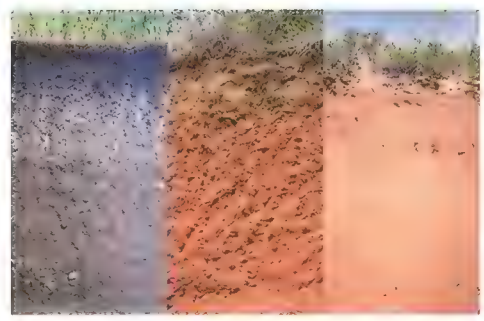
Chinese landscape paintings such as this one on an 18th-century fan romanticized gentlemen travelers. Follow the "Guests of the Hills" opening August 23 at the Freer Gallery August 23.

LUXURIOUS LIVING

"House Proud," at New York City's Cooper-Hewitt, presents watercolors (and furnishings like this French clock, below) that depict the lavish interiors of 19th-century European bourgeoisie homes. Opens August 12.

NEW FACES IN TOWN

Through January 25, the National Portrait Gallery is showcasing recently acquired photographs, paintings and drawings, including this portrayal of Secretary of State Frank Billings Kellogg, painted by Philip Alexius de Laszlo in 1925.



THE DIRT ON DIRT

The Natural History Museum looks at a hidden world, that is home to myriad insects, bacteria, plants and fungi. The earth beneath your feet comes alive at "Dig It! The Secrets of Soil," through January 3, 2010.

DAZZLING PHYSICS

"Magnetic Movie" (right) uses striking animation to depict the wildly undulating magnetic fields that scientists create at a NASA lab. Playing at the Hirshhorn Museum from August 25 through December 14.

BY KENNETH R. FLETCHER

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Up Against The Wall

A journalist's travels along China's 4,000-mile Great Wall reveal widespread deterioration despite the efforts of a few embattled preservationists

BY BROOK LARMER

PHOTOGRAPHS BY MARK LEONG

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THE GREAT WALL OF CHINA snakes along a ridge in front of me, its towers and ramparts creating a panorama that could have been lifted from a Ming dynasty scroll. I should be enjoying the view, but I'm focused instead on the feet of my guide, Sun Zhenyuan. Clambering behind him across the rocks, I can't help but marvel at his footwear. He is wearing cloth slippers with wafer-thin rubber soles, better suited to tai chi than a trek along a mountainous section of the wall.

Sun, a 59-year-old farmer turned preservationist, is conducting a daily reconnaissance along a crumbling 16th-century stretch of the wall overlooking his home, Dongjiakou village, in eastern Hebei Province. We stand nearly 4,000 twisting miles from where the Great Wall begins in China's western deserts—and only 40 miles from where it plunges into the Bohai Sea, the innermost gulf of the Yellow Sea on the coast of northeast China. Only 170 miles distant, but a world away, lies Beijing, where seven million spectators are about to converge for the Summer Olympics. (The massive earthquake that hit southern China in May did not damage the wall, although tremors could be felt on sections of it near Beijing.)

Sun Zhenyuan views preserving the wall as a sacred mission: "If you had an old house that people were damaging, wouldn't you want to protect it?"

Hiking toward a watchtower on the ridge above us, Sun sets a brisk pace, stopping only to check his slippers' fraying seams. "They cost only ten yuan [$1.40]," he says, "but I wear out a pair every two weeks." I do a quick calculation: over the past decade, Sun must have burned through some 260 pairs of shoes as he's carried out his crusade to protect one of China's greatest treasures—and to preserve his family's honor.

EMPIRE'S EDGE
In the deserts of northwestern China, where the wall begins, centuries of erosion have taken their toll on the tamped-earth barrier. Shepherds in the region (like the herder, right) move flocks through doors cut into the once-impregnable ramparts intended, beginning in the 1500s, to repel successive invaders.

Twenty-one generations ago, in the mid-1500s, Sun's ancestors arrived at this hilly outpost wearing military uniforms (and, presumably, sturdier footwear). His forebears, he says, were officers in the Ming imperial army, part of a contingent that came from southern China to shore up one of the wall's most vulnerable sections. Under the command of General Qi Jiguang, they added to an earlier stone and earthen barrier, erected nearly two centuries before at the beginning of the Ming dynasty. Qi Jiguang also added a new feature—watchtowers—at every peak, trough and turn. The towers, built between 1569 and 1573, enabled troops to shelter in secure outposts on the wall itself as they awaited Mongol attacks. Even more vitally, the towers also functioned as sophisticated signaling stations, enabling the Ming army to mitigate the wall's most impressive, but daunting, feature: its staggering length.

As we near the top of the ridge, Sun quickens his pace. The Great Wall looms directly above us, a 30-foot-high face of rough-hewed stone topped by a two-story watchtower. When we reach the tower, he points at the Chinese characters carved above the arched doorway, which translate to Sunjialou, or Sun Family Tower. "I see this as a family treasure, not just a national treasure," Sun says. "If you had an old house that people were damaging, wouldn't you want to protect it?"

He gazes toward the horizon. As he conjures up the dangers that Ming soldiers once faced, the past and present seem to intertwine. "Where we're standing is the edge of the world," he says. "Behind us is China. Out there"—he gestures toward craggy cliffs to the north—"the land of the barbarians."

FEW CULTURAL LANDMARKS symbolize the sweep of a nation's history more powerfully than the Great Wall of China. Constructed by a succession of imperial dynasties over 2,000 years, the network of barriers, towers and fortifications expanded over the centuries, defining and defending the outer limits of Chinese civilization. At the height of its importance during the Ming dynasty (1368-1644), the Great Wall is believed to have extended some 4,000 miles, the distance from New York to Milan.

Today, however, China's most iconic monument is under assault by both man and nature. No one knows just how much of the wall has already been lost. Chinese experts estimate that more than two-thirds may have been damaged or destroyed, while the rest remains under siege. "The Great Wall is a miracle, a cultural achievement not just for China but for humanity," says Dong Yaohui, president of the China Great Wall Society. "If we let it get damaged beyond repair in just one or two generations, it will be our lasting shame."

The barbarians, of course, have changed. Gone are the invading Tatars (who broke through the Great Wall in 1550), Mongols (whose raids kept Sun's ancestors occupied) and

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PP. 32-33 MARK LEONG / REDUX

PP. 34-35 MICHAEL YAMASHITA

The Ming routed the Mongols, then embarked on a **three-century wall-building campaign** to prevent a return invasion by the Khan's nomadic heirs.

Manchus (who poured through uncontested in 1644). Today's threats come from reckless tourists, opportunistic developers, an indifferent public and the ravages of nature. Taken together, these forces—largely byproducts of China's economic boom—imperil the wall, from its tamped-earth ramparts in the western deserts to its majestic stone fortifications spanning the forested hills north of Beijing, near Badaling, where several million tourists converge each year.

From its origins under the first emperor in the third century B.C., the Great Wall has never been a single barrier, as early Western accounts claimed. Rather, it was an overlapping maze of ramparts and towers that was unified only during frenzied Ming dynasty construction, beginning in the late 1300s. As a defense system, the wall ultimately failed, not because of intrinsic design flaws but because of the internal weaknesses—corruption, cowardice, infighting—of various imperial regimes. For three centuries after the Ming dynasty collapsed, Chinese intellectuals tended to view the wall as a colossal waste of lives and resources that testified less to the nation's strength than to a crippling sense of in-

security. In the 1960s, Mao Zedong's Red Guards carried this disdain to revolutionary excess, destroying sections of an ancient monument perceived as a feudal relic.

Nevertheless, the Great Wall has endured as a symbol of national identity, sustained in no small part by successive waves of foreigners who have celebrated its splendors—and perpetuated its myths. Among the most persistent fallacies is that it is the only man-made structure visible from space. (In fact, one can make out a number of other landmarks, including the pyramids. The wall, according to a recent *Scientific American* report, is visible only "from low orbit under a specific set of weather and lighting conditions.") Mao's reformist successor, Deng Xiaoping, understood the wall's iconic value. "Love China, Restore the Great Wall," he declared in 1984, initiating a repair and reconstruction campaign along the wall north of Beijing. Perhaps Deng sensed that the nation he hoped to build into a superpower needed to reclaim the legacy of a China whose ingenuity had built one of the world's greatest wonders.

DEFENSIVE LINE
The Ming-era wall (depicted above) extended some 4,000 miles. In 1908, the first American to walk its length, William Geil, trekked from "the tempestuous main of the Yellow Sea to the thirsty sands of the distant desert."

Today, the ancient monument is caught in contemporary China's contradictions, in which a nascent impulse to preserve the past confronts a headlong rush toward the future. Curious to observe this collision up close, I recently walked along two stretches of the Ming-era wall, separated by a thousand miles—the stone ramparts undulating through the hills near Sun's home in eastern Hebei Province and an earthen barrier that cuts across the plains of Ningxia in the west. Even along these relatively well-preserved sections, threats to the wall—whether by nature or neglect, by reckless industrial expansion or profit-hungry tour operators—pose daunting challenges.

Yet a small but increasingly vocal group of cultural preservationists act as defenders of the Great Wall. Some, like Sun, patrol its ramparts. Others have pushed the government to enact new laws and have initiated a comprehensive, ten-year GPS survey that may reveal exactly how long the Great Wall once was—and how much of it has been lost.

IN NORTHWEST CHINA'S NINGXIA REGION, on a barren desert hilltop, a local shepherd, Ding Shangyi, and I gaze out at a scene of austere beauty. The ocher-colored wall below us, constructed of tamped earth instead of stone, lacks the undulations and crenelations that define the eastern sections. But here, a simpler wall curves along the western flank of the Helan Mountains, extending across a rocky moonscape to the far horizon. For the Ming dynasty, this was the frontier, the end of the world—and it still feels that way.

Ding, 52, lives alone in the shadow of the wall near Sanguankou Pass. He corrals his 700 sheep at night in a pen that abuts the 30-foot-tall barrier. Centuries of erosion have rounded the wall's edges and pockmarked its sides, making it seem less a monumental achievement than a kind of giant sponge laid across gravelly terrain. Although Ding has no idea of the wall's age—"a hundred years old," Ding guesses, off by about three and a half centuries—he reckons correctly that it was meant to "repel the Mongols."

From our hilltop, Ding and I can make out the remnants of a 40-foot-high tower on the flats below Sanguankou. Relying on observation sites like this one, soldiers transmitted signals from the front lines back to the military command. Employing smoke by day and fire at night, they could send messages down the line at a rate of 620 miles per day—or about 26 miles per hour, faster than a man on horseback.

According to Cheng Dalin, a 66-year-old photographer and a leading authority on the wall, the signals also conveyed the degree of threat: an incursion of 100 men required one lighted beacon and a round of cannon fire, he says, while 5,000 men merited five plumes of smoke and five cannon shots. The tallest, straightest columns of smoke were produced by wolf dung, which explains why, even today, the outbreak of war is described in literary Chinese as "a rash of wolf smoke across the land."

Nowhere are threats to the wall more evident than in Ningxia. The most relentless enemy is desertification—a scourge that began with construction of the Great Wall itself. Imperial policy decreed that grass and trees be torched within 60 miles of the wall, depriving enemies of the element of surprise. Inside the wall, the cleared land was used for crops to sustain soldiers. By the middle of the Ming dynasty, 2.8 million acres of forest had been converted to farmland. The result? "An environmental disaster," says Cheng.

Today, with the added pressures of global warming, overgrazing and unwise agricultural policies, China's northern desert is expanding at an alarming rate, devouring approximately one million acres of grassland annually. The Great Wall stands in its path. Shifting sands may occasional-

MAP: GUILBERT GATES

ly expose a long-buried section—as happened in Ningxia in 2002—but for the most part, they do far more harm than good. Rising dunes swallow entire stretches of wall; fierce desert winds shear off its top and sides like a sandblaster. Here, along the flanks of the Helan Mountains, water, ironically enough, is the greatest threat. Flash floods run off denuded highlands, gouging out the wall's base and causing upper levels to teeter and collapse.

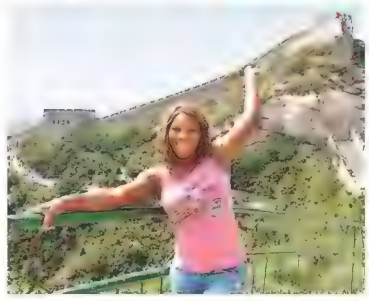
At Sanguankou Pass, two large gaps have been blasted through the wall, one for a highway linking Ningxia to Inner Mongolia—the wall here marks the border—and the other for a quarry operated by a state-owned gravel company. Trucks rumble through the breach every few minutes, picking up loads of rock destined to pave Ningxia's roads. Less than a mile away, wild horses lope along the wall, while Ding's sheep forage for roots on rocky hills.

The plundering of the Great Wall, once fed by poverty, is now fueled by progress. In the early days of the People's Republic, in the 1950s, peasants pilfered tamped earth from the ramparts to replenish their fields, and stones to build houses. (I recently visited families in the Ningxia town of Yanchi who still live in caves dug out of the wall during the Cultural Revolution of 1966-76.) Two decades of economic growth have turned small-scale damage into major destruction. In Shizuishan, a heavily polluted industrial city along the Yellow River in northern Ningxia, the wall has collapsed because of erosion—even as the Great Wall Industrial Park thrives next door. Elsewhere in Ningxia, construction of a paper mill in Zhongwei and a petrochemical factory in Yanchi has destroyed sections of the wall.

Regulations enacted in late 2006—focusing on protecting the Great Wall in its entirety—were intended to curb such abuses. Damaging the wall is now a criminal offense. Anyone caught bulldozing sections or conducting all-night raves on its ramparts—two of many indignities the wall has suffered—now faces fines. The laws, however, contain no provisions for extra personnel or funds. According to Dong Yaohui, president of the China Great Wall Society, "The problem is not lack of laws, but failure to put them into practice."

Enforcement is especially difficult in Ningxia, where a vast, 900-mile-long network of walls is overseen by a cultural heritage bureau with only three employees. On a recent visit to the region, Cheng Dalin investigated several violations of the new regulations and recommended penalties against three companies that had blasted holes in the wall. But even if the fines were paid—and it's not clear that they were—his intervention came too late. The wall in those three areas had already been destroyed.

Back on the hilltop, I ask Ding if watching the wall's slow disintegration provokes a sense of loss. He shrugs and offers me a piece of guoba, the crust of scorched rice scraped from the bottom of a pot. Unlike Sun, my guide in Hebei, Ding confesses that he has no special feeling for the wall. He has lived in a mud-brick shack on its Inner Mongolian side for three years. Even in the wall's deteriorated condition, it shields him from desert winds and provides his sheep with shelter. So Ding treats it as nothing more, or less, than a welcome feature in an unforgiving environment. We sit in silence for a minute, listening to the sound of sheep ripping up the last shoots of grass on these rocky hills. This entire area may be desert soon, and the wall will be more vulnerable than ever. It's a prospect that doesn't bother Ding. "The Great Wall was built for war," he says. "What's it good for now?"



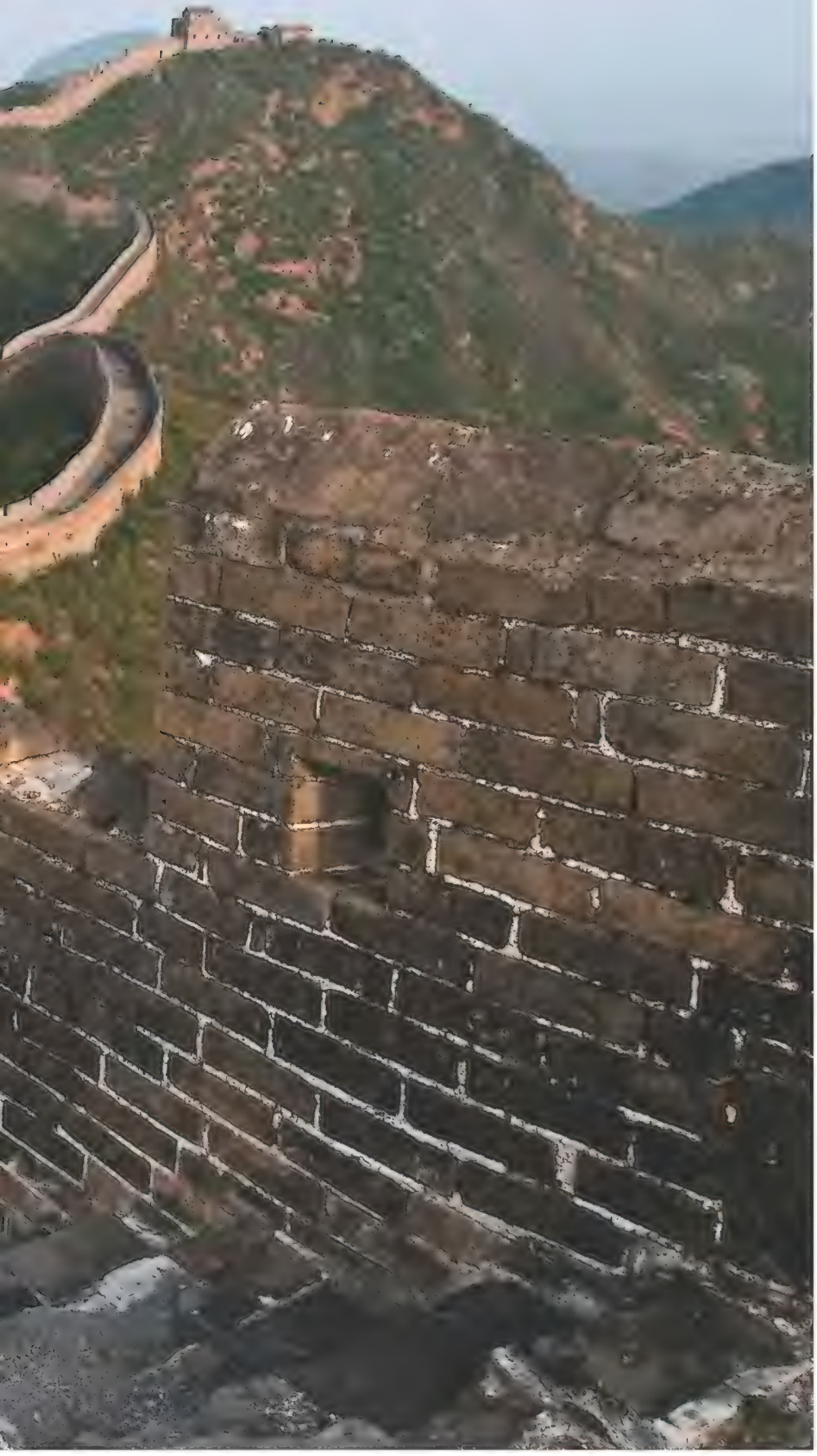
SIGHTINGS AT THE WALL
Heads of state and film stars have succumbed to the structure's lure. Clockwise, from top: actor Jackie Chan, 2008; models in Fendi fashion show, 2007; Greta Garbo on the set of *The Painted Veil* intended to depict the wall, 1934; British rockers George Michael and Andrew Ridgeley, 1985; Fidel Castro, 1995; President and Mrs. Nixon, 1972; tennis' Serena Willams, 2005.

ANDY WONG / AP IMAGES; CSPA / NEWSPORT / CORBIS; MICHAEL BAZ / CHINA OPEN VIA GETTY IMAGES; HULTON ARCHIVE / GETTY IMAGES; AP IMAGES; NEAL PRESTON; ROBYN BECK / AFP / GETTY IMAGES

A WEEK LATER AND A THOUSAND MILES AWAY in Shandong Province, I stare at a section of wall zig-zagging up a mountain. From battlements to watchtowers, the structure looks much like the Ming wall at Badaling. On closer inspection, however, the wall here, near the village of Hetouying, is made not of stone but of concrete grooved to mimic stone. The local Communist Party secretary who oversaw the project from 1999 on must have figured that visitors would want a wall like the real thing at Badaling. (A modest ancient wall, constructed here 2,000 years before the Ming, was covered over.)

But there are no visitors; the silence is broken only when a caretaker arrives to unlock the gate. A 62-year-old retired factory worker, Mr. Fu—he gives only his surname—waives the 30-cent entrance fee. I climb the wall to the top of the ridge, where I'm greeted by two stone lions and a 40-foot-tall statue of Guanyin, the Buddhist goddess of mercy. When I return, Mr. Fu is waiting to tell me just how little mercy the villagers have received. Not long after factories usurped their farmland a decade ago, he says, the party secretary persuaded them to invest in the reproduction wall. Mr. Fu lost his savings. "It was a waste of money," he says, adding that I'm the first tourist to visit in months. "Officials talk about protecting the Great Wall, but they just want to make money from tourism."

Certainly the Great Wall is big business. At Badaling, visitors can buy Mao T-shirts, have their photo taken on a camel or sip a latte at Starbucks—before even setting foot on the wall. Half an hour away, at Mutianyu, sightseers don't even have to walk at all. After being disgorged from tour buses, they can ride to the top of the wall in a cable car.



LABOR OF LOVE
Photographer Cheng Dalin has been documenting the wall for 30 years and is a leading authority on the structure. Smoke signals from towers like those at Jinshanling (left), says Cheng, conveyed threats from invaders: a force of 5,000 merited five smoke plumes and five cannon shots.

radius of the wall and requiring wall-related revenue to be funneled into preservation. But pressure to turn the wall into a cash-generating commodity is powerful. Two years ago, a melee broke out along the wall on the border between Hebei and Beijing, as officials from both sides traded punches over who could charge tourist fees; five people were injured. More damaging than fists, though, have been construction crews that have rebuilt the wall at various points—including a site near the city of Jinan where fieldstone was replaced by bathroom tiles. According to independent scholar David Spindler, an American who has studied the Ming-era wall since 2002, "reckless restoration is the greatest danger."

The Great Wall is rendered even more vulnerable by a paucity of scholarship. Spindler is an exception. There is not a single Chinese academic—indeed, not a scholar at any university in the world—who specializes in the Great Wall; academia has largely avoided a subject that spans so many centuries and disciplines—from history and politics to archaeology and architecture. As a result, some of the monument's most basic facts, from its length to details of its construction, are unknown. "What exactly is the Great Wall?" asks He Shuzhong, founder and chairman of the Beijing Cultural Heritage Protection Center (CHP), a nongovernmental organization. "Nobody knows exactly where it begins or ends. Nobody can say what its real condition is."

That gap in knowledge may soon be closing. Two years ago, the Chinese government launched an ambitious ten-year survey to determine the wall's precise length and assess its condition. Thirty years ago, a preliminary survey team relied on little more than tape measures and string; today, researchers are using GPS and imaging technology. "This measuring is fundamental," says William Lindesay, a British preservationist who heads the Beijing-based International Friends of the Great Wall. "Only when we know exactly what is left of the Great Wall can we begin to understand how it might be saved."

Some of the monument's most basic facts are unknown. "What exactly is the Great Wall?" asks He Shuzhong. "Nobody knows exactly where it begins or ends."

In 2006 golfers promoting the Johnnie Walker Classic teed off from the wall at Juyongguan Pass outside Beijing. And last year the French-owned fashion house Fendi transformed the ramparts into a catwalk for the Great Wall's first couture extravaganza, a media-saturated event that offended traditionalists. "Too often," says Dong Yaohui, of the China Great Wall Society, "people see only the exploitable value of the wall and not its historical value."

The Chinese government has vowed to restrict commercialization, banning mercantile activities within a 330-foot

AS SUN ZHENYUAN AND I DUCK through the arched doorway of his family watchtower, his pride turns to dismay. Fresh graffiti scars the stone walls. Beer bottles and food wrappers cover the floor. This kind of defilement occurs increasingly, as day-trippers drive from Beijing to picnic on the wall. In this case, Sun believes he knows who the

PP. 38-39 MARK LEONG / REDUX

culprits are. At the trail head, we had passed two obviously inebriated men, expensively attired, staggering down from the wall with companions who appeared to be wives or girlfriends toward a parked Audi sedan. "Maybe they have a lot of money," Sun says, "but they have no culture."

In many villages along the wall, especially in the hills northeast of Beijing, inhabitants claim descent from soldiers who once served there. Sun believes his ancestral roots in the region originated in an unusual policy shift that occurred nearly 450 years ago, when Ming General Qi Jiguang, trying to stem massive desertions, allowed soldiers to bring wives and children to the frontlines. Local commanders were assigned to different towers, which their families treated with proprietary pride. Today, the six towers along the ridge above Dongjiakou bear surnames shared by nearly all the village's 122 families: Sun, Chen, Geng, Li, Zhao and Zhang.

Sun began his preservationist crusade almost by accident a decade ago. As he trekked along the wall in search of medicinal plants, he often quarreled with

FIERCE DEFENDER
Although many sections of the wall (right: at Badaling, near Beijing) may appear little changed, many preservationists (below: Dong Yaohui) fear for its survival. "If we let it get damaged beyond repair in just one or two generations," he says, "it will be our lasting shame."

Sun flashes a license and informs them that he is, in effect, **the constable of the Great Wall**: "Don't make any graffiti, don't disturb any stones and don't leave any trash behind."

scorpion hunters who were ripping stones from the wall to get at their prey (used in the preparation of traditional medicines). He also confronted shepherds who allowed their herds to trample the ramparts. Sun's patrols continued for eight years before the Beijing Cultural Heritage Protection Center began sponsoring his work in 2004. CHP chairman He Shuzhong hopes to turn Sun's lonely quest into a full-fledged movement. "What we need is an army of Mr. Suns," says He. "If there were 5,000 or 10,000 like him, the Great Wall would be very well protected."

Perhaps the greatest challenge lies in the fact that the wall extends for long stretches through sparsely populated regions, such as Ningxia, where few inhabitants feel any connection to it—or have a stake in its survival. Some peasants I met in Ningxia denied that the tamped-earth barrier running past their village was part of the Great Wall, insisting that it looked nothing like the crenelated stone fortifications of Badaling they've seen on television. And a Chinese survey conducted in 2006 found that only 28 percent of respondents thought the Great Wall needed to be protected. "It's still difficult to talk about cultural heritage in China," says He, "to tell people that this is their own re-

MARK LEONG / REDUX

Read about the first American to walk the entire wall, in 1908, at Smithsonian.com/wall

sponsibility, that this should give them pride."

Dongjiakou is one of the few places where protection efforts are taking hold. When the local Funin County government took over the CHP program two years ago, it recruited 18 local residents to help Sun patrol the wall. Preservation initiatives like his, the government believes, could help boost the sagging fortunes of rural villages by attracting tourists who want to experience the "wild wall." As leader of his local group, Sun is paid about $120 per year; others receive a bit less. Sun is confident that his family legacy will continue into the 22nd generation: his teenage nephew now joins him on his outings.

From the entrance to the Sun Family Tower, we hear footsteps and wheezing. A couple of tourists—an overweight teenage boy and his underweight girlfriend—climb the last steps onto the ramparts. Sun flashes a government-issued license and informs them that he is, in effect, the constable of the Great Wall. "Don't make any graffiti, don't disturb any stones and don't leave any trash behind," he says. "I have the authority to fine you if you violate any of these rules." The couple nods solemnly. As they walk away, Sun calls after them: "Always remember the words of Chairman Deng Xiaoping: 'Love China, Restore the Great Wall!'"

As Sun cleans the trash from his family's watchtower, he spies a glint of metal on the ground. It's a set of car keys: the black leather ring is imprinted with the word "Audi." Under normal circumstances, Sun would hurry down the mountain to deliver the keys to their owners. This time, however, he'll wait for the culprits to hike back up, looking for the keys—and then deliver a stern lecture about showing proper respect for China's greatest cultural monument. Flashing a mischievous smile, he slides the keys into the pocket of his Mao jacket. It's one small victory over the barbarians at the gate.

PP. 40-41 BLAINE HARRINGTON

Red, white and bruising: at the 1968 Democratic National Convention, conflicts within the hall were amplified in violence on Chicago's streets.

PARTIES TO HISTORY

Four Political Conventions That Changed America

NOWADAYS, the Republican and Democratic conventions to nominate a presidential candidate are little more than coronation ceremonies—carefully choreographed political theater in which the outcome is preordained. Every detail is accounted for, from the text of the speeches to the number of balloons dropped on the red-white-and-blue-clad delegates. The overall goal is to project an image of party unity, a ritual coming together following an often divisive primary campaign.

But there was a time when the Republican and Democratic conventions were bare-knuckled political brawls. It was democracy at its messiest, as delegates bartered their allegiances, secretly courted candidates, challenged the authority of their party's leadership and even stormed out and held their own

protest conventions. At issue was not just the nominee for president but the ideological platforms their chosen candidates would champion. The national conventions emerged as venues for confronting the most pressing issues of the day: the civil rights movement, the size and role of the federal government, reining in the power of the federal courts, how best to confront enemies abroad and when to bring U.S. troops home.

The national conventions thus became crucibles not only for shaping the political parties as we know them today, but for reshaping America itself. With this in mind, we asked four leading authorities to survey the most consequential Republican and Democratic conventions of the 20th century.

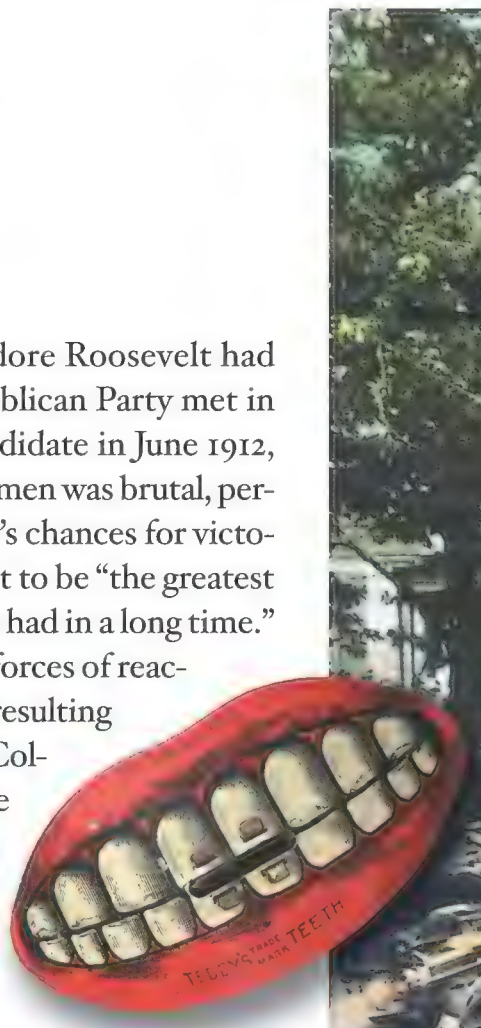
GARY MAMAY; PP. 42-43 AP IMAGES

1912 ☆ REPUBLICAN

RETURN OF THE ROUGH RIDER

BY LEWIS L. GOULD

WILLIAM HOWARD TAFT and Theodore Roosevelt had once been friends. But when the Republican Party met in Chicago to choose its presidential candidate in June 1912, the nomination battle between the two men was brutal, personal—and ultimately fatal to the party's chances for victory in November. Taft declared Roosevelt to be "the greatest menace to our institutions that we have had in a long time." Roosevelt saw Taft as the agent of "the forces of reaction and of political crookedness." The resulting floor fight in the aptly named Chicago Coliseum lived up to the prediction of the Irish-American humorist Finley Peter Dunne that the convention would be "a combynation iv th' Chicago fire, Saint Bartholomew's massacree, the battle iv th' Boyne, th' life iv Jesse James, an' th' night iv th' big wind."



Roosevelt (right: as a Progressive in a tinted 1912 photograph; above: a whistle shaped like his teeth) ran against his chosen successor, William Howard Taft, in 1912.

For years, the tensions within the Grand Old Party had been building over the issue of government regulation. During his presidency, Roosevelt had advocated a "Square Deal" between capital and labor in American society. By the time he left the White House in March 1909, Roosevelt believed that the federal government must do more to supervise large corporations, improve the lot of women and children who worked long hours for low wages in industry, and conserve natural resources. "When I say that I am for the square deal, I mean not merely that I stand for fair play under the present rules of the game, but that I stand for having those rules changed so as to work for a more substantial equality of opportunity and of reward for equally good service," he said in August 1910. Roosevelt was especially critical of the state and federal courts for overturning reform legislation as unconstitutional, and he said that such decisions were "funda-

mentally hostile to every species of real popular government."

Roosevelt's burgeoning crusade for more active government reflected his loss of faith in William Howard Taft, whom the former Rough Rider had chosen as his successor. As president, Taft had sided with the conservative wing of the party, which had opposed Roosevelt's reforms at every turn. For his part, Taft believed Roosevelt had stretched the power of the executive branch too far. As a lawyer and former federal judge, Taft had nothing but disdain for his predecessor's jaundiced view of the judiciary. "The regret which he certainly expressed that the courts had the power to set aside statutes," wrote the president, "was an attack upon our system at the very point where I think it is the strongest."

Tensions deepened in 1912, when Roosevelt began advocating the recall of judicial decisions through popular vote. With the courts tamed as an enemy to reform, Roosevelt then would press forward "to see that the wage-worker, the small producer, the ordinary consumer, shall get their fair share of the benefit of business prosperity." To enact his program, Roosevelt signaled that he would accept another term as president and seek the nomination of the Republican Party.

These ambitions revealed, Taft and his fellow conservatives deemed Roosevelt a dangerous radical. Once in power for a third term, they said, Roosevelt would be a perpetual chief executive. Roosevelt had become the most dangerous man in American history, said Taft, "because of his hold upon the less intelligent voters and the discontented." The social justice that Roosevelt sought involved, in Taft's opinion, "a forced division of property, and that means socialism."

Taft dominated the Republican Party machinery in many states, but a few state primaries gave the voters a chance to express themselves. The president and his former friend took to the hustings, and across the country in the spring of 1912 the campaign rhetoric escalated. Roosevelt described Taft as a "puzzlewit," while the president labeled Roosevelt a "honeyfugler." Driven to distraction under Roosevelt's attacks, Taft said in Massachusetts, "I was a man of straw; but I have been a man of straw long enough; every man who has blood in his body and who has been misrepresented as I have is forced to fight." A delighted Roosevelt supporter commented that "Taft certainly made a great mistake when he began to 'fight back.' He has too big a paunch to have much of a punch, while a free-for-all, slap-bang, kick-him-in-the-belly, is just nuts for the chief."

Roosevelt won all the Republican primaries against Taft except in Massachusetts. Taft dominated the caucuses that sent delegates to the state conventions. When the voting was done, neither man had the 540 delegates needed to win. Roosevelt had 411, Taft had 367 and minor candidates had 46, leaving 254 up for grabs. The Republican National Committee, dominated by the Taft forces, awarded 235 delegates to the president and 19 to Roosevelt, thereby ensuring Taft's renomination. Roosevelt believed himself entitled to 72 delegates from Arizona, California, Texas and Washington that had been given to Taft.

PP. 44-45 GRANGER COLLECTION, NEW YORK

Firm in his conviction that the nomination was being stolen from him, Roosevelt decided to break the precedent that kept the candidates away from the national convention and lead his forces to Chicago in person. The night before the proceedings Roosevelt told cheering supporters that there was "a great moral issue" at stake and he should have "sixty to eighty lawfully elected delegates" added to his total. Otherwise, he said, the contested delegates should not vote. Roosevelt ended his speech declaring: "Fearless of the future; unheeding of our individual fates; with unflinching hearts and undimmed eyes; we stand at Armageddon, and we battle for the Lord!"

The convention was not Armageddon, but to observers it seemed a close second. Shouts of "liar" and cries of "steamroller" punctuated the proceedings. One pro-Taft observer said that "a tension pervaded the Coliseum breathing the general feeling that a parting of the ways was imminent." William Allen White, the famous Kansas editor, looked down from the press tables "into the human caldron that was boiling all around me."

"Puzzlewit," TR called Taft. "Honeyfugler," Taft called TR.

On the first day, the Roosevelt forces lost a test vote on the temporary chairman. Taft's man, Elihu Root, prevailed. Roosevelt's supporters tried to have 72 of their delegates substituted for Taft partisans on the list of those officially allowed to take part in the convention. When that initiative failed, Roosevelt knew that he could not win, and had earlier rejected the idea of a compromise third candidate. "I'll name the compromise candidate. He'll be me. I'll name the compromise platform. It will be our platform." With that, he bolted from the party and instructed his delegates not to take part in the voting; Taft easily won on the first ballot. Roosevelt, meanwhile, said he was going "to nominate for the presidency a Progressive on a Progressive platform."

In August, Roosevelt did just that, running as the candidate of the Progressive Party. Both he and Taft lost to the Democratic candidate, Woodrow Wilson, that November. Yet, for Republicans who supported Taft, the electoral defeat was worth the ideological victory. As a Republican observed during the campaign: "We can't elect Taft & we must do anything to elect Wilson so as to defeat Roosevelt."

That outcome would resonate for decades. In its week of controversy and recrimination in Chicago, the Republican Party became the party of smaller government and less regulation—and it held to these convictions through the New Deal of the 1930s and beyond.

LEWIS L. GOULD *is the author of* Four Hats in the Ring: The 1912 Election and the Birth of Modern American Politics.

1948 ☆ DEMOCRATIC

THE SOUTH SECEDES AGAIN

BY ALONZO L. HAMBY

THE DEMOCRATS CAME to Philadelphia on July 12, seventeen days after the Republicans, meeting in the same city, had nominated a dream ticket of two hugely popular governors: Thomas E. Dewey of New York for president and Earl Warren of California for vice president.

The Democrats' man, President Harry S. Truman, had labored for more than three years in the enormous shadow of Franklin D. Roosevelt. In their hearts, all but the most optimistic delegates thought, as Clare Boothe Luce had told the Republican gathering, that the president was a "gone goose."

Truman, a failed haberdasher turned politician, had the appearance of a meek bookkeeper. In fact, he was feisty and prone to occasional angry outbursts. His upper-South twang did not resonate with much of the country. His many detractors wrote him off as a "little man" who had been unable to deal with difficult post-World War II issues—inflation and consumer shortages, civil rights for African-Americans and a developing cold war with the Soviet Union.

In the off-year elections of 1946, Republicans had gained firm control of both houses of Congress for the first time since 1928. Few Democrats believed Truman could lead them to victory in the presidential race. A large group of cold war liberals—many of them organized in the new Americans for Democratic Action (ADA)—joined with other Democratic leaders in an attempt to draft America's greatest living hero, Gen. Dwight D. Eisenhower, as their candidate. The general seemed momentarily persuadable, then quickly backed away.

It was no coincidence that both parties met in Philadelphia. The city was at the center point of the Boston to Richmond coaxial cable, then the main carrier of live television in the United States. By 1948, as many as ten million people from Boston to Richmond could watch the tumultuous process by which the major parties selected their candidates. They could also see star journalists whom they had known only as voices, most notably the CBS team of Edward R. Murrow, Quincy Howe and Douglas Edwards.

The parties met amid miles of media cable and wiring in Convention Hall, an imposing Art Deco arena decorated with exterior friezes that celebrated American values and the history of humankind. The structure could accommodate 12,000 people. Packed to the rafters on a steamy July day, heated by blazing television lights and possessing no effective cooling system, the great hall was like an enormous sauna.

GARY MAMAY; GRANGER COLLECTION, NEW YORK

The Democrats' keynote speaker was Senator Alben Barkley of Kentucky. A presence on Capitol Hill since 1912 and the Democratic leader in the upper house for more than a decade, Barkley was much liked throughout the party and a master orator in the grand tradition. His speech scourged the Republican-controlled Congress, quoted patron saints of the Democratic Party from Jefferson to FDR, expropriated Lincoln along the way and cited biblical text from the Book of Revelation. The delegates cheered themselves hoarse, and an ensuing demonstration waved "Barkley for Vice President" placards.

Truman, watching the proceedings on TV in Washington, was not amused. He considered "old man Barkley" (at age 70, six and a half years his senior) to be little more than a hail fellow with whom one sipped bourbon and swapped tall tales. The president wanted a young, dynamic and aggressively liberal running mate. He already had offered the slot to Supreme Court Justice William O. Douglas, who declined. With no backup, Truman turned to Barkley: "Why didn't you tell me you wanted to run, Alben? That's all you had to do." Barkley accepted.

Truman (above) committed the Democrats to civil rights. After the party splintered, Strom Thurmond (below: hands raised) ran as the candidate of the States' Rights Party.

By then, the attention of the delegates had shifted to a platform fight that marked the full emergence of the modern Democratic Party. African-Americans were an important Democratic constituency, but so were white Southerners. Previous party platforms had never gotten beyond bland generalizations about equal rights for all. Truman was prepared to accept another such document, but liberals, led by the ADA, wanted to commit the party to four specific points in the president's own civil rights program: abolition of state poll taxes in federal elections, an anti-lynching law, a permanent fair employment practices committee and desegregation of the armed forces.

Hubert Humphrey, mayor of Minneapolis and a candidate for Senate, delivered the liberal argument in an intensely emotional speech: "The time is now arrived in America for the Democratic Party to get out of the shadow of states' rights and walk forthrightly into the bright sunshine of human rights." On July 14, the last day of the convention, the liberals won a close vote. The entire Mississippi delegation and half the Alabama contingent walked out of the convention. The rest of the South would back Senator Richard B.

BETTMANN / CORBIS; AP IMAGES

Russell of Georgia as a protest candidate against Truman for the presidential nomination.

Nearly two weeks after the convention, the president issued executive orders mandating equal opportunity in the armed forces and in the federal civil service. Outraged segregationists moved ahead with the formation of a States' Rights ("Dixiecrat") Party with Gov. Strom Thurmond of South Carolina as its presidential candidate. The States' Rights Party avoided outright race baiting, but everyone understood that it was motivated by more than abstract constitutional principles.

Truman was slated to deliver his acceptance speech at 10 p.m. on July 14 but arrived to find the gathering hopelessly behind schedule. As he waited, nominating speeches and roll calls droned on and on. Finally, at 2 a.m. he stepped up to the podium. Most of America was sound asleep.

He wore a white linen suit and dark tie, ideal for the stifling hall and the rudimentary capabilities of 1948 television. His speech sounded almost spit into the ether at the opposition. "Senator Barkley and I will win this election and make these Republicans like it—don't you forget that!" He announced he would call Congress back into session on July 26—Turnip Day to Missouri farmers—and dare it to pass all the liberal-sounding legislation endorsed in the Republican platform. "The battle lines of 1948 are the same as they were in 1932," he declared, "when the nation lay prostrate and helpless as a result of Republican misrule and inaction." *New York Times* radio and TV critic Jack Gould judged it perhaps the best performance of Truman's presidency: "He was relaxed and supremely confident, swaying on the balls of his feet with almost a methodical rhythm."

The delegates loved it. Truman's tireless campaigning that fall culminated in a feel-good victory of a little guy over an organization man. It especially seemed to revitalize the liberals, for whom the platform fight in Philadelphia became a legendary turning point. "We tied civil rights to the masthead of the Democratic Party forever," remarked ADA activist Joseph Rauh 40 years later.

In truth, the ramifications of that victory would require two decades to play out. In the meantime, Thurmond, winning four states and 39 electoral votes, had fired a telling shot across the Democrats' bow. Dixiecrat insurgents in Congress returned to their seats in 1949 with no penalty from their Democratic colleagues. Party leaders, North and South, understood the danger of a spreading revolt. Truman would not backtrack on his commitment to civil rights, but neither would Congress give him the civil rights legislation he requested.

His successors as party leader would show little disposition to push civil rights until the mass protests led by Martin Luther King Jr. forced the hands of John F. Kennedy and Lyndon B. Johnson. Only then would the ultimate threat of the Dixiecrats be realized—the movement of the white South into the Republican Party.

ALONZO L. HAMBY, *a professor of history at Ohio University, wrote* Man of the People: A Life of Harry S. Truman.

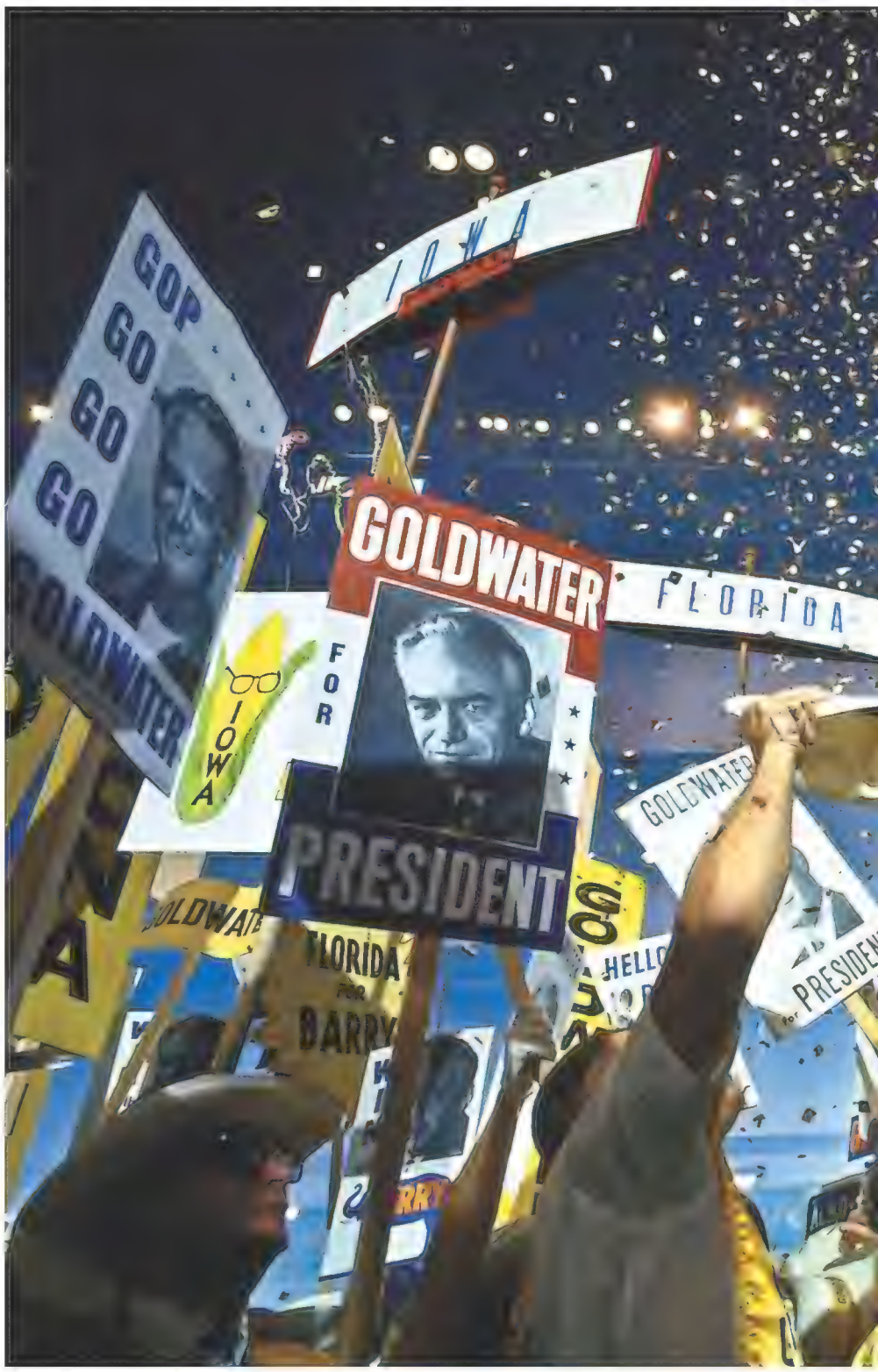
1964 ☆ REPUBLICAN

REVOLUTION FROM THE RIGHT

BY RICK PERLSTEIN

THERE WERE ONLY THREE small elevators at the Mark Hopkins, the splendid old San Francisco hotel that served as headquarters for contenders Barry Goldwater and William Scranton during the 1964 Republican National Convention. The wait that hot July week could stretch to 45 minutes. The day Goldwater was to accept the nomination at the Cow Palace in nearby Daly City, he caught a service elevator in the hotel kitchen.

That was where a reporter cornered the Arizona senator and asked him whether the Democrats would campaign on



GARY MAMAY; PP. 48-49 JOHN DOMINIS / TIME LIFE PICTURES / GETTY IMAGES

the fact that nearly 70 percent of the convention delegates, acting on his campaign's instructions, had voted down a platform plank affirming the constitutionality of the recently passed Civil Rights Act. "After Lyndon Johnson—the biggest faker in the United States? He opposed civil rights until this year. Let them make an issue of it," Goldwater snapped back. "He's the phoniest individual who ever came around."

Goldwater's tone reflected the tenor of this ugliest of Republican conventions since 1912, as entrenched moderates faced off against conservative insurgents. In an era in which a national consensus seemed to have coalesced around advancing civil rights, containing Communism and expanding government, the moderates believed they had to win to preserve the Republican Party. The conservatives—who wanted to contain the role of the federal government and roll back Communism—believed they were saving not just the party but Western civilization.

The logy Mark Hopkins elevators gave the insurgents, flooding into town for what Goldwater biographer Robert Alan Goldberg called the "Woodstock of the right," at least two chances a day to bait Chet Huntley and David Brinkley, anchors of NBC's nightly newscast—and crypto-liberals, according to their harassers. "You know, these nighttime news shows sound to me like they're being broadcast from Moscow," one conservative observed to another on the way down, loud enough for the two newsmen to hear. Brinkley forbade his son, Alan, to show his NBC insignia, except to security.

After Barry Goldwater clinched the nomination, delegates were showered with simulated gold coins, and the "Wall Street Republicans" were in eclipse.

The volume of right-wing rage at the media was novel at this Republican convention. Unprecedented, too, was the attention focused on the issue of television coverage. The convention was the first since CBS and NBC had expanded their nightly newscasts from 15 minutes to 30 minutes, and the first since the assassination and funeral of President John F. Kennedy redefined the bond between television and politics. In 1960, there were about as many journalists, both print and broadcast, as delegates. Four years later, broadcasters alone outnumbered delegates two to one.

As it happened, Alan Brinkley grew up to become one of the most distinguished historians of 20th-century American politics. He has written of the 1964 conventions, Republican and Democratic, as transitional—managed by politicians who were accustomed to backroom deal-making and high-pressure crowd tactics and were caught up short to learn that they were suddenly in the business of producing a TV show.

And what a show the GOP convention was! Conservatives from the West, the South and the Midwest were convinced that the only way moderate "Wall Street Republicans" had been able to run away with the presidential nomination every four years was that "a few secret kingmakers in New York" conspired to steal it, as Illinois activist

Phyllis Schlafly put it in a self-published book, *A Choice Not an Echo*, several hundred thousand copies of which were distributed in the summer of 1964. (Some convention delegates reported receiving more than 60 copies in the mail.) They weren't going to let it be stolen this time.

Goldwater's finance chairman, Bill Middendorf, warned campaign aide Dean Burch that "the 1952 tricks will be used again": planted stories, whispering campaigns, threats, cajolery and the "shanghaiing and spiriting of delegates and alternates to distant points." Goldwater delegates were warned to be on the lookout "for unexpectedly easy companionship from new-found female friends." They were to contact the Goldwater headquarters on the 15th floor of the Mark Hopkins immediately after landing at the airport and to travel around town in pairs along pre-timed routes in radio-equipped cars. They used walkie-talkies only as backups, because these could be too easily tapped into—as, indeed, they had tapped into Scranton's.

Rising anger at the media found specific targets in newscasters Chet Huntley (left) and David Brinkley of NBC.

Bill Scranton, whose patrician family ran the Pennsylvania coal town that bore his name, seemed to comedian Dick Gregory like "the guy who runs to John Wayne for help." (Goldwater looked like a cowboy.) Scranton had entered the race as a last-minute act of noblesse oblige. "Today the nation—and indeed the world—waits to see if another proud political banner will falter, grow limp and collapse in the dust," he had said as he announced his candidacy just four weeks before the convention. "Lincoln would cry out in pain if we sold out our principles."

According to a Harris Poll taken late that June, 62 percent of rank and file Republicans preferred Scranton to Goldwater, but the supposed Wall Street kingmakers were in dithering disarray. ("What in God's name has happened to the Republican Party!" muttered Henry Cabot Lodge—the party's 1960 vice presidential nominee—as he paged through the delegate list in his hotel room. "I hardly know any of these people!") The moderates' strategy was to put the Goldwaterites' perceived extremism on televised display, hoping delegates would flock to Scranton after being flooded by telegrams from outraged voters watching at home.

The moderates circulated a translation of an interview Goldwater had given to a German newsmagazine, in which he was quoted as saying he would tell his generals in Vietnam, "Fellows, we made the decision to win, now it's your problem." CBS correspondent Daniel Schorr then reported, "It is now clear that Senator Goldwater's interview with *Der Spiegel* with its hard line appealing to right-wing elements in Germany was only the start of a move to link up with his opposite numbers in Germany," with Schorr basing his assertion simply on the fact that Goldwater would be vacationing after the convention at an American military installation that was, coincidentally, in the former Nazi stronghold of Bavaria. (Schorr later said he did not mean to suggest "a conscious effort" by Goldwater to connect with the German right.)

Schorr's report only stirred the hornet's nest: the delegates who had trooped to the conservative Woodstock to nominate Goldwater greeted calls that they abandon him with angry defiance, and their loyalty put their candidate over the top. When Nelson Rockefeller, speaking to the assembled, advocated a platform plank denouncing extremism, galleries full of exuberant conservatives booed him. In his acceptance speech, Goldwater capped off the snub by lustily and defiantly proclaiming: "Extremism in the defense of liberty is no vice. And . . . moderation in the pursuit of justice is no virtue!" He raised the rafters.

The "stench of fascism is in the air," Pat Brown, California's liberal Democratic governor, told the press. His view was widely shared. The political world's near unanimous judgment was that Goldwater's landslide loss to LBJ that November was a disaster for all Republicans, not just conservative Republicans.

But Bill Middendorf would more accurately call his memoir of that year *A Glorious Disaster*. Out of its ashes and out of the fervent grassroots organizing that delivered Goldwater his unlikely nomination emerged a Republican Party surer of its identity and better positioned to harvest the bounty—particularly in the South—when the American mood shifted to the right during the cacophonous years that followed.

RICK PERLSTEIN *is the author, most recently, of* Nixonland: The Rise of a President and the Fracturing of America.

BETTMANN / CORBIS

1968 ☆ DEMOCRATIC

THE BOSSES STRIKE BACK

BY HAYNES JOHNSON

AS DELEGATES ARRIVED in Chicago the last week of August 1968 for the 35th Democratic National Convention, they found that Mayor Richard J. Daley, second only to President Lyndon B. Johnson in political influence, had lined the avenues leading to the convention center with posters of trilling birds and blooming flowers. Along with these pleasing pictures, he had ordered new redwood fences installed to screen the squalid lots of the aromatic stockyards adjoining the convention site. At the International Amphitheatre, conventioneers found that the main doors, modeled after a White House portico, had been bulletproofed. The hall itself was surrounded by a steel fence topped with barbed wire. Inside the fence, clusters of armed and helmeted police mingled with

security guards and dark-suited agents of the Secret Service. At the apex of the stone gates through which all had to enter was a huge sign bearing the unintentionally ironic words, "HELLO DEMOCRATS! WELCOME TO CHICAGO."

Inside the convention hall (above), delegates battled over the Vietnam War and the power of the party establishment. Outside (left), Chicago police prepared for a parallel battle with antiwar protesters who flooded the city.

If this Potemkin village setting weren't enough to intensify anxiety among Democrats gathering to nominate their presidential candidate, the very elements and conditions of Chicago life contributed to a sense of impending disaster. The weather was oppressively hot and humid. The air conditioning, the elevators and the phones were operating erratically. Taxis weren't operating at all because the drivers had called a strike before the convention began. The National Guard had been mobilized and ordered to shoot to kill, if necessary.

Even as delegates began entering this encampment, an army of protesters from across the country flowed into the city, camping in parks and filling churches, coffee shops, homes and storefront offices. They were a hybrid group—radicals, hippies, yippies, moderates—representing myriad issues and a wide range of philosophies, but they were united behind an encompassing cause: ending the long war in Vietnam and challenging Democratic Party leaders and their delegates to break with the past, create change—yes, that was the term then on every protester's lips—and remake the battered U.S. political system. As Rennie Davis put it, speaking as project director for the National Mobilization Committee to End the War in Vietnam, the largest and most important group for the planned protests: "Many of our people have already gone be-

BETTMANN / CORBIS (2)

yond the traditional electoral processes to achieve change. We think that the energies released . . . are creating a new constituency for America. Many people are coming to Chicago with a sense of new urgency, and a new approach."

Senator Eugene McCarthy rallied antiwar Democrats (above: in New York City just before the Chicago convention), but that alone wasn't enough to sustain his candidacy. At the convention his supporters showed up in force but were relegated to the role of protesters.

What followed was worse than even the most dire pessimist could have envisioned.

The 1968 Chicago convention became a lacerating event, a distillation of a year of heartbreak, assassinations, riots and a breakdown in law and order that made it seem as if the country were coming apart. In its psychic impact, and its long-term political consequences, it eclipsed any other such convention in American history, destroying faith in politicians, in the political system, in the country and in its institutions. No one who was there, or who watched it on television, could escape the memory of what took place before their eyes.

Include me in that group, for I was an eyewitness to those scenes: inside the convention hall, with daily shouting matches between red-faced delegates and party leaders often lasting until 3 o'clock in the morning; outside in the violence that descended after Chicago police officers took off their badges and waded into the chanting crowds of protesters to club them to the ground. I can still recall the choking feeling from the tear gas hurled by police amid throngs of protesters gathering in parks and hotel lobbies.

For Democrats in particular, Chicago was a disaster. It left the party with scars that last to this day, when they meet in a national convention amid evidence of internal divisions unmatched since 1968.

To understand the dimensions of the Democrats' calamity, recall that in 1964, Lyndon B. Johnson had defeated Barry Goldwater for the presidency with 61.1 percent of the popular vote, a margin eclipsing even the greatest previous electoral victory, by Franklin D. Roosevelt over Alf Landon in 1936. In mid-1964, passage of civil rights legislation had virtually ended legal segregation in America. Optimists had begun talking about America's entering a "golden age."

By that next summer, however, the common cause of blacks and whites marching together had been shattered as riots swept the Watts section of Los Angeles and, over the next two years, cities across the country. In that same initially hopeful year, the Johnson administration had made a fateful commitment to keep increasing the numbers of troops to fight a ground war in Vietnam, an escalation that would spawn wave upon wave of protest. In the 1966 congressional elections, Democrats—who had been experiencing the

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LARRY MORRIS / THE NEW YORK TIMES / REDUX; GARY MAMAY

greatest electoral majorities since the New Deal—sustained severe defeats.

As 1968 began, greater shocks awaited the nation: North Vietnamese forces launched the Tet offensive that January, rocking U.S. troops and shattering any notion that the war was nearly won. Johnson withdrew from the presidential campaign that March. Martin Luther King Jr. was assassinated in Memphis in early April, and another succession of riots swept the cities. Robert F. Kennedy, heir to the Kennedy legacy, had his presidential campaign cut down by an assassin's bullet after winning the critical California primary in June.

It was against this extraordinarily emotional background that the Democrats convened. Hubert H. Humphrey, LBJ's vice president, had sat out the primaries but secured delegates controlled by the party establishment. Senator Eugene McCarthy—the antiwar candidate whose strong second-place showing in the New Hampshire primary had demonstrated Johnson's vulnerability—had abundant forces in the hall, but they were now relegated to the role of protesters. Senator George S. McGovern had rallied what remained of Kennedy's forces, but he, too, knew he led a group whose hopes had been extinguished.

Hubert Humphrey (top: pointing to running mate Edmund Muskie) sat out the primaries but still won the nomination. Violence in the streets (police and an unidentified protester) confirmed many voters' view of a party in disarray.

From whatever political perspective—party regulars, irregulars or reformers—they all shared an abiding pessimism over their prospects against a Republican Party that had coalesced behind Richard M. Nixon. They gave voice to their various frustrations in the International Amphitheatre during bitter, often profane, floor fights over antiwar resolutions. The eventual nomination of Humphrey, perceived heir to Johnson's war policies, compounded the sense of betrayal among those who opposed the war. The bosses, not the people who voted in the primaries, had won.

The violence that rent the convention throughout that week, much of it captured live on television, confirmed both the Democrats' pessimism and the country's judgment of a political party torn by dissension and disunity. In November the party would lose the White House to Nixon's law-and-order campaign. In the nine presidential elections since, Democrats have won only three, and only once—in 1976, after the Watergate scandal forced Nixon to resign in disgrace—did they take, barely, more than 50 percent of the votes.

Changes in party rules have curtailed the establishment's power to anoint a presidential nominee, but the ideological divides have persisted; thus this year's rival candidates battled bitterly to win state primaries. And after such a divisive primary season, in the end the nomination still depended on the "superdelegates" that replaced the party bosses.

One 1968 memory remains indelible 40 years later. Throughout that week I had been a guest commentator on NBC's "Today" show, broadcasting live from Chicago. Early Friday morning, a few hours after the convention ended, I took the elevator to the lobby of the Conrad Hilton Hotel, where I had been staying, to head for the studio. As the elevator doors opened, I saw huddled before me a group of young McCarthy volunteers. They had been bludgeoned by Chicago police, and sat there with their arms around each other and their backs against the wall, bloody and sobbing, consoling one another. I don't know what I said on the "Today" show that morning. I do remember that I was filled with a furious rage. Just thinking of it now makes me angry all over again.

HAYNES JOHNSON, *who has written 14 books, covered the 1968 Democratic National Convention for the* Washington Star.

BETTMANN / CORBIS; LEE BALTERMAN / TIME LIFE PICTURES / GETTY IMAGES

Where did you think tomato paste came from? A harvester in California's Sacramento Valley gathers tons of Roma-type tomatoes for Morning Star, the world's largest tomato-processing company.

Which is more **nutritious**, the commercial variety that goes into **ketchup** or the **precious heirloom** beloved by gourmets? Why has a Florida **genetic engineer** developed a tomato that tastes like **wintergreen**? Undeterred by this summer's **salmonella scare**, a culinary correspondent still has

A PASSION FOR TOMATOES

By Arthur Allen

Photographs by Ed Darack

Nothing quite showcases the industrial bounty of California agriculture like a vast field of tomatoes baking in the August sun. A rich, dusky red emanates from beneath the curled, dying leaves. A nearly two-story-tall mechanical harvester run by the Morning Star tomato-processing company clatters through the Sacramento Valley field. As the machine hums along at about three miles per hour, it uproots two rows of plants and lays them on a belt that conveys them to the top of the harvester, where the vines are sucked through a shredder and blown back onto the field as the tomatoes cascade onto other belts. Electronic eyes send signals to plastic fingers that pop out anything not red or green. Dirt clods, last year's squash and the errant toad and mouse tumble to the ground. The ripe fruit is funneled into a tandem trailer. In ten minutes, the machine gathers more than 22,000 pounds of Roma-type processing tomatoes.

I get into a pickup truck with Cameron Tattam, a Morning Star supervisor, and we follow a semitractor that hooks up to the trailer, pulls out of the field and then barrels down Interstate 5 to a Morning Star cannery outside the town of Williams. This 120-acre facility is the largest of its type in the world. During the three months of the local harvest, it handles more than 1.2 million pounds of tomatoes every hour. The tomatoes I just saw getting picked are washed down a stainless steel flume and plunged into a 210-degree cooker. The heat and pressure blow them apart. After passing through evaporators and cooling pipes, they will end up three hours later as sterile-packed tomato paste in 3,000-pound boxes. For the next two weeks, the facility will produce nothing but paste that is destined to become Heinz ketchup. Among Morning Star's other large customers are Pizza Hut, Campbell's Soup and Unilever, maker of Ragu.

Heirlooms get the glory, but consumers eat mostly processed tomatoes. At a Morning Star plant in Los Banos, California, Romas in fast-moving flumes are sorted by color before being canned, sliced, diced or concentrated.

Processing tomatoes—condensed or canned—make up 75 percent of the tomatoes that Americans eat. Farmers think of them as an entirely different crop than fresh-market tomatoes. The variety that Tattam and I watched being harvested is a hybrid called Heinz 2401. It was bred to maximize yield, with thick-skinned, fleshy fruit that ripen simultaneously so they can be picked all at once and withstand a machine's rough handling. Its genes maximize the conversion of solar rays into sugars and solids. These tomatoes have thin cavities, or locules, where the seeds and juices—and many flavors—are stored. There is little point in having a lot of volatile flavors in a processing tomato because cooking boils them off, and, besides, much of the flavor of ketchup and tomato sauce comes from whatever the tomatoes are mixed with. The Heinz 2401 is also bred for resistance to tomato pathogens, of which there are many: beetles and nematodes, fungi such as fusarium and verticillium, and viruses such as yellow leaf curl and spotted wilt, which are carried in the wind, the soil or the mouths of pests such as whitefly and thrips. Because it doesn't really matter what processing tomatoes look like, they require fewer applications of pesticides than do fresh-market varieties. The Romas I saw being harvested had been sprayed only once.

There's something a bit brutal about the production methods exemplified by Morning Star's operations, which are all about maximizing yield and efficiency. But the industrial tomato has its place, even if foodies turn up their noses at it. "You want us to be out there with hoes, like in a third-world nation?" Tattam says. "How else are you going to feed 350 million people?"

The next day I drive 30 miles south to the live-oak-shaded compound of Full Belly Farm, a small operation in the Capay Valley. An organic farm that grows up to 100 crops, including 25 tomato varieties, it couldn't be more different

PP. 54-57 ED DARACK / WWW.DARACK.COM

from Morning Star. Full Belly's farmers fertilize their fields with dung from their own sheep, herded into the fields after harvest. A bank of trees and shrubs by the creek harbors bats and birds that feast on insects—pest control. The farm relies as much as possible on such predators as well as good mulch. When those measures fail, it turns to organic controls, including garlic, cedar and clove oils. "Our goal is to somehow take the farm, which is an artificial system, and mimic the systems you see in the natural world," says partner Andrew Brait, 42, whose heirloom tomatoes are one of the farm's biggest sources of profit.

Brait has staked his heirloom tomatoes in a patch of uneven bottomland alongside gorgeous heirloom peppers, eggplants and squash. But in the tomato patch, things don't look quite so good. Tobacco mosaic virus, long ago controlled by breeding resistance into commercial tomatoes, has attacked the vines, causing the leaves to shrivel and some of the fruit to abort while tiny. The plants are still growing, and Brait will be happy if they yield as little as five tons to the acre, or about one-eighth of a Morning Star harvest from one acre. Chic Bay Area stores and restaurants such as the Zuni Café and Chez Panisse cheerfully shell out $2.50 a pound for Brait's heirloom tomatoes. (Last year Morning Star reportedly paid farmers the equivalent of 3 cents a pound.) In the farm's packinghouse, Brait feeds me vine-ripened Green Zebras, verdigris-and-orange-mottled Marvel Stripes and Zapotec Pinks, wrinkled as a bulldog's muzzle (the breeder term is "catfaced"). I chew on his tiny Sun Gold cherry tomatoes and

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TAINTED TOMATOES

A food-poisoning scare spurs debate

The salmonella outbreak that began in April and was linked to raw tomatoes was the largest of about a dozen such outbreaks since 1990, sickening more than 800 people in 36 states and the District of Columbia as of late June.

The outbreak involved consumers of raw red plum, red Roma or red round tomatoes suspected of carrying the rare "saintpaul" strain of salmonella bacteria. As many as 20,000 cases of illness may have gone unreported, according to the Centers for Disease Control and Prevention. News of the outbreak prompted many consumers, restaurants and markets to shun tomatoes. A Food and Drug Administration (FDA) probe eventually focused on tomatoes grown in Mexico and Florida, though they could have become contaminated almost anywhere from field to market.

Salmonella bacteria normally inhabit the digestive tract of wild and domestic animals; when people ingest the bacteria, symptoms can range from cramps to diarrhea. A common source of produce contamination is runoff waste from livestock and poultry farms. Salmonella that infect a tomato blossom can flourish inside the growing fruit. The bacteria can stick to the skin or seep inside a harvested tomato through the stem scar if the water in which it's rinsed harbors the pathogen and is colder than the fruit itself.

Consumers can't be blamed for feeling alarmed. There has been a rise in outbreaks linked to tainted produce, with 639 between 1990 and 2004, according to the Center for Science in the Public Interest. Some of that increase is due to better monitoring, but industry watchdogs say it also reflects lax oversight by the FDA, which regulates produce. In June, a Government Accountability Office report faulted the FDA for not strengthening food-safety programs. The FDA says it doesn't have the people or resources to keep tabs on every farm and shipper. In 2007, the agency launched the Tomato Safety Initiative in Florida and Virginia, areas linked to previous outbreaks.

The latest salmonella outbreak (the FDA's Mark Roh in June) raised questions about food safety.

Big produce growers estimate the outbreak may cost the industry $100 million. Meanwhile, advocates of locally produced food say the crisis only underscores the dangers of the industrialized food supply. In any event, there's reason to believe this summer's outbreak won't be the last. "Zero risk in an open environment like a field isn't really realistic," says Michelle Smith, a scientist in the FDA's food safety division. **AMANDA BENSEN**

get a sour blast, followed by a burst of sweetness that deposits a complex honey musk on my upper palate.

In recent years, heirloom tomatoes have become a mainstay of gourmet culture, a testament to authenticity and a strike against the complaint, voiced fervently by *Boston Globe* columnist Ellen Goodman, that the everyday tomato "has had its hide toughened" and "has been pushed around, squared, even gassed to death," every year becoming "less of a fruit and more of a metaphor."

But let us not be tomato snobs. Let us acknowledge that the pleasure of the heirloom itself is as much metaphorical as real. The heirloom's huge variety of shapes and colors and flavors offers a reassuring sense of diversity in a cookie-cutter world; backyard cultivation gives the city dweller or suburbanite an almost spiritual connection to an ancestral agrarian past. I'm aware of no evidence that heirlooms make you healthier than hybrid tomatoes. And the cheap, mass-produced processing tomato yields more concentrated nutrients than the fresh-market varieties that are picked green. "There's more antioxidant activity in a tablespoon of paste than a box of fresh tomatoes," says Kanti Rawal of San Leandro, California, who has no reason to exaggerate—he's a breeder of fresh-market varieties. Not only that, antioxidant tomato micronutrients such as lycopene and beta carotene are more easily absorbed when consumed with cooking oil, according to some research. Yes, Virginia, pizza is good for you.

Even in the fresh-market world, not everyone is convinced that heirlooms taste best. "What is good flavor?" says Teresa Bunn, a breeder at Seminis, a seed company owned by Monsanto. "Everyone has a different perception. You can do things to boost sugars and acids, but people want a different balance. It's hard to get people to agree on the same thing." There's also the issue of how appearance and "mouth feel" affect the perception of tomato quality. "If you're blindfolded, an orange tomato may taste good, but a lot of people won't buy an orange tomato," Bunn says. Most eaters mistrust mealy tomatoes, even if they are flavorful. Still, heirloom tomatoes do tend to have more intense flavors, Bunn says. "You can think of a tomato as a factory, with each leaf a worker. Heirlooms have fewer fruit and more factory. On the commercial side, farmers are paid for yield. They want as many fruit as they can get. A lot of times it's perceived that heirlooms are better tasting, but it could be that they just pack more flavor into them. And just because it's an heirloom doesn't mean it's a good tomato." Flavor is in the mouth of the taster. "I can't stand the flavor of Brandywines," says John "Jay" W. Scott, a well-known Florida tomato breeder, voicing apostasy about a choice heirloom variety.

A year ago, I set out to learn how the world's second most popular "vegetable" (the potato is No. 1) had connived its way into the major cuisines of the world. Perhaps more than any other food, tomatoes inspire passion. Whether it's outrage over the "cardboard" supermarket tomato, pride in the recipe that great-grandma brought over from the old

KEVORK DJANSEZIAN / AP IMAGES

JOHN LEE / AURORA SELECT

Purveyor to chic eateries and gourmet markets, Full Belly Farm in California (farmer Andrew Brait in a patch of Sun Gold cherry tomatoes) epitomizes the organic way: bats eat the bugs, sheep fertilize the fields.

country, or the mystique of that homegrown tomato vine, the smell and feel and even the texture of tomatoes manage to get under almost everyone's skin. Still, despite what the organic-obsessed Cassandras might have us believe, the tomato is thriving, even at Safeway. The recent nationwide alarm after hundreds of consumers were sickened after eating fresh tomatoes contaminated by salmonella bacteria (see opposite page) underscored consumers' intense attachment to the fruit. "Business is down 50 percent," Bob Pizza, chief executive of What a Tomato Produce Company, told me at the San Francisco Wholesale Produce Market. "But sales will come back. People can't do without their tomatoes."

The tomato, *Solanum lycopersicum* (formerly *Lycopersicon esculentum*), is a peculiarly flavored species of the nightshade family, which also includes potatoes, eggplants, peppers and the deadly belladonna. It is a product of what is known as the Columbian exchange, that unequal sharing of genetic material following the conquest of the New World. The Old World got tomatoes, potatoes, chocolate, squash, corn and peppers. The new one got coffee, sugar cane and cotton—and the African slaves to cultivate them—as well as smallpox, measles and other previously unknown contagious diseases that devastated the native population.

Many wild tomato types grow throughout the Andes from Chile to Colombia, but the plant was apparently first cultivated in Mexico by the Maya, the Nahua and others. Marvelous accounts of tomato diversity are recorded in the *Florentine Codex*. According to that collection of ancient Mexican lore begun in the 1540s by the Spanish priest Bernardino de Sahagún, vendors sold "large tomatoes, small tomatoes, and leaf tomatoes" as well as "large serpent tomatoes" and "nipple-shaped tomatoes" at the Nahua market at Tlatelolco, in what is now downtown Mexico City. They were "quite yellow, red, very red, quite ruddy, ruddy, bright red, reddish" and "rosy-dawn colored." Some were bitter tomatoes "which scratch one's throat, which make one's saliva smack, make one's saliva flow; those which burn the throat."

The Spanish conquest took the tomato first to Spain in the early 16th century, and from there to the Middle East and Italy, though tomato sauce would not become an Italian mainstay until the late 18th century. Tomatoes were long thought to be poisonous, perhaps because of the alkaline flavor of the earliest cultivated iteration and their similarity to belladonna. Lore has it that Thomas Jefferson, who grew tomatoes at Monticello, helped destroy the poison myth by consuming his harvest. The tomato soon found its way onto American plates and even into tomato pills, an early dietary supplement craze. The tomato itself is a seed-bearing fruit, but the Supreme Court, noting its customary place in the meal, classified it as a vegetable in 1893, for the purpose of deciding which tariff to charge for imports.

Green Zebra sorbet, anyone? At TomatoFest near Carmel, foodies sample hundreds of heirloom varieties, many crafted into unlikely delectables by leading chefs.

In the early 20th century, Heinz ketchup and Campbell's Soup drove U.S. tomato consumption. Because tomatoes are finicky—frequently attacked by viruses, fungi and insects—large-scale tomato farming took root in California, where the dry summers minimize pestilence. (Because water fosters growth of fungi and mold, the cardinal rule of tomato watering is: Don't get their heads wet.) A dramatic change in the very nature of the tomato came in the late 1950s, when Jack Hanna, a plant breeder at the University of California at Davis, developed a hardy, tough-skinned tomato that could be more readily harvested by machines, then being developed in Michigan and California. Within a couple of decades, machines were gathering most of California's tomatoes.

The architect of the modern commercial tomato was Charles Rick, a University of California geneticist. In the early 1940s, Rick, studying the tomato's 12 chromosomes, made it a model for plant genetics. He also reached back into the fruit's past, making more than a dozen bioprospecting trips to Latin America to recover living wild relatives. There is scarcely a commercially produced tomato that didn't benefit from Rick's discoveries. The gene that makes such tomatoes easily fall off the vine, for instance, came from *Solanum cheesmaniae*, a species that Rick brought back from the Galápagos Islands. Resistances to worms, wilts and viruses were also found in Rick's menagerie of wild tomatoes.

Flavor, however, has not been a goal of most breeding programs. While importing traits like disease resistance, smaller locules, firmness and thicker fruit into the tomato genome, breeders undoubtedly removed genes influencing taste. In the past, many leading tomato breeders were indifferent to this fact. Today, things are different. Many farmers, responding to consumer demand, are delving into the tomato's preindustrial past to find the flavors of yesteryear.

Each September, a former restaurateur named Gary Ibsen holds TomatoFest, a celebration of the heirloom tomato outside Carmel, California. The definition of an heirloom is somewhat vague, but all are self-pollinators that have been bred true for 40 years or more. (By contrast, a commercial hybrid is a cross between two parents carefully chosen for notable traits, with the seeds produced by physically pollinating each flower by hand; tomato breeders contract out that painstaking task, mostly to companies in China, India and Southeast Asia.) At TomatoFest, about 3,000 people tasted 350 heirloom tomato varieties and various tomato-based dishes prepared by leading chefs. "I never cook with fresh tomatoes unless I can get heirlooms," Craig von Foerster, chef at the Post Ranch Inn in Big Sur, told me as he ladled out a mesmerizing Thai-spiced gazpacho made with Lemon Boy and Marvel Stripe tomatoes. David Poth, kitchen manager at Google corporate headquarters, in Mountain View, had had a hand in a triplet of sorbets made from Green Zebras, Brandywines—and salmon. Ah, California.

At the heirloom table, I saw that the Red Peaches looked leathery. The Russian Limes were yellow with nipples. The Black Cherries, Black Princes, Black Zebras and Black Russians had dark olive green skins with muddy orange shading. The big pink-striated Dinner Plate looked like a nectarine. The German Red Strawberry was indeed shaped like a giant strawberry. Green Sausages were

For seasonal tomato recipes and more, go to Smithsonian.com/tomatoes

BOB CROSLIN / AURORA SELECT

Florida is the nation's No. 1 source of fresh-market tomatoes (grape tomatoes at a DiMare Inc. farm in Apollo Beach), boasting a $464 million crop in 2007.

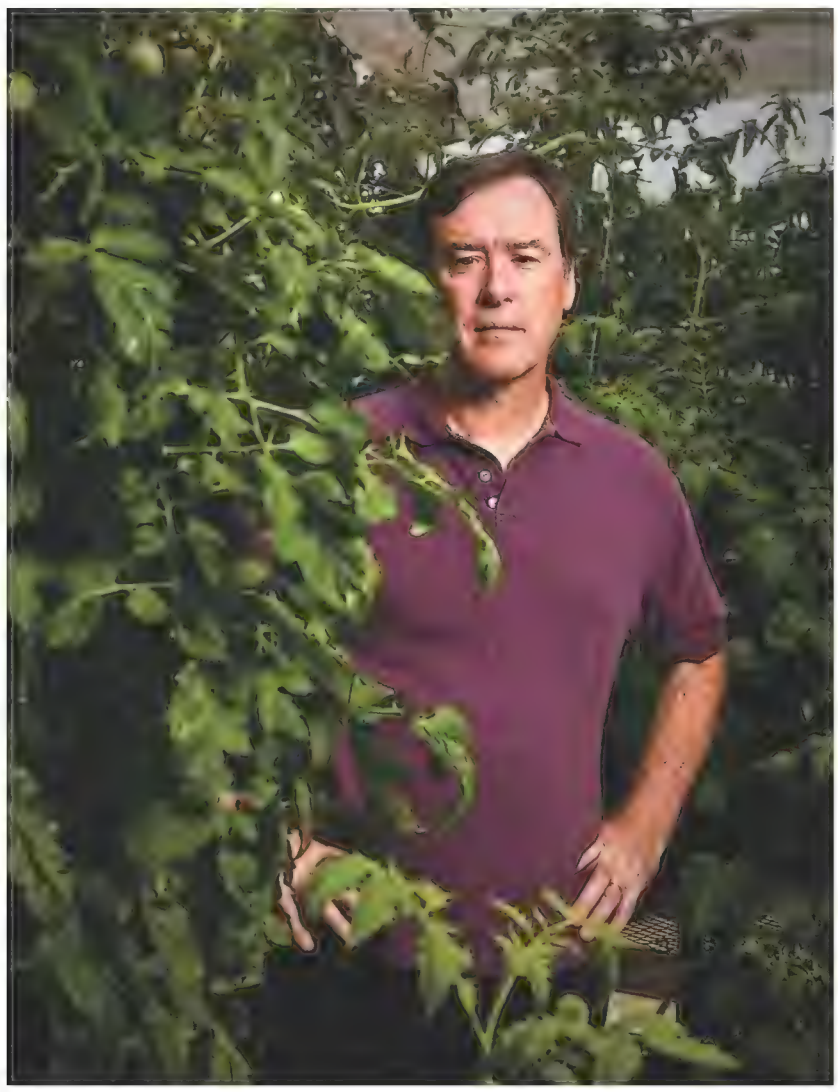
French's Mustard yellow and lime green, and shaped like pickles. After an hour or so, I was experiencing what the experts call taste fatigue. And I was getting a stomachache.

Ibsen had named Clint Eastwood's Rowdy Red after his friend, the actor-director and former Carmel mayor. "It's a very sweet tomato," Ibsen said. A panel of vintners and chefs voted as its favorite the Paul Robeson—a large blackish purple beefsteak tomato named after the African-American singer and actor. But for me and several others, the champ was the small, leathery-looking Speckled Peach, a German-bred tomato that packs a wallop of tang and sweetness. "It reminds me of fruit," said Hannah Grogin, age 9, of Pebble Beach. Regina Greel, a hospital employee from Berkeley, said, "They taste melony, like peaches, but fruity, not tomato-y. Like a combination of a cantaloupe and a peach." Eureka, I thought: the perfect tomato.

Florida is the biggest supplier of winter fresh tomatoes for U.S. consumers, though Canada, where they're grown in greenhouses in the spring and winter, and Mexico are cutting into the Sunshine State's market. Tomato-growing in Florida is a tough business, because of, among other things, high humidity and frequent storms, which can wreak microbial havoc. "We see more diseases in a season than they do in California in a year," one expert says.

To get Florida tomatoes, which have traditionally been bred for size and durability, to Northern shoppers, the fruits are usually picked as hard and green as Granny Smith apples, packed in boxes, warehoused and exposed to controlled doses of ethylene gas, a ripening agent, so they turn red just in time for sale. Farmers often get a premium for big tomatoes. (On the day I visited the DiMare Inc. operation near Ruskin, Florida, the market was $14 for a 25-pound box of extra-large tomatoes, $10 for medium tomatoes.) The consumer consensus is that these tomatoes don't taste like much; 60 percent will end up in fast food, sliced thin for burgers and subs or chopped into the salsa that garnishes tacos and burritos. Along the way shippers and shoppers frequently refrigerate them—a no-no that ruins the texture and what little flavor they started with.

Some academic specialists are trying to improve the dispiriting state of the Florida tomato. Jay Scott, of the University of Florida's Gulf Coast Research and Education Center near Tampa, has contributed to the development of many tomato varieties found at supermarkets around the country. Seeds from a dwarf tomato he bred, the Micro-Tom, even flew on the space shuttle *Endeavour* in 2007 as part of an experiment to test the practicality of growing food on long-haul space missions. The flavor of tomatoes, Scott says, comes from sugars, acids and volatile chemicals. Photosynthesis generates sucrose, or table sugar, which is broken down into glucose and the sweeter fructose during ripening. The concentration and balance of glucose and fructose determine the degree of sweetness. Acidity comes mostly from citric and malic acid. "If you have a tomato without many acids, it may be bland or insipid. You need acid to go with the sweet," says Scott. "But if acids are too high, you can't perceive the sweet. So it's a balance. And it's better when both are high."



While everyone complains about the bland taste of Florida tomatoes, Harry Klee (in his University of Florida lab hothouse) is actually trying to do something about it.

That's hard to achieve in a big tomato, though, because "you've maxed out the plant's ability to produce sugars and other flavors," says Harry Klee, a biochemist at the university's Gainesville campus. The subtleties of tomato flavor derive mainly from about 20 of the 400 volatile chemicals in the fruit's flesh and juice. Klee and his co-workers are using genetic engineering techniques to enhance some of those key volatiles to improve the flavor of commercial tomatoes. It's a peculiar task, this job of trying to make bland tomatoes taste good.

I visited Klee's laboratory to taste a fresh transgenic tomato that his colleague Denise Tieman had produced. Using a technique developed in the 1980s by Monsanto, Tieman and a graduate student endowed a tomato with a gene that enhances production of methylsalicylate, a compound better known as oil of wintergreen, a natural volatile component of tomatoes. Tieman fed me a slice of ripe tomato from one of the transgenic plants. It had a flavor that I associated, at some level, with freshness, but it was not particularly good. Tieman fed me another transgenic variety that had 50 to 100 times higher than normal levels of another volatile tomato flavor component, phenylacetaldehyde—the familiar rose oil odor of cheap perfume, bath soaps and detergents. The DNA containing this gene was recovered from *Solanum pennellii*, a tomato native to Peru. The smell was intense—and not pleasant. The tomato left an aftertaste of a lady's powder room on the roof of my mouth. "You wouldn't really want a tomato to taste like that," Tieman says. But like the wintergreen tomato, she added, "it proves that you can alter these flavors." If any of the transgenic tomatoes prove promising, Klee says, traditional breeding techniques might be developed to produce them, obviating concerns about eating a genetically engineered food.

Whether Klee and other flavoristas succeed or not, we can take comfort in the tomato's continuing, explosive diversity: the U.S. Department of Agriculture has a library of 5,000 seed varieties, and heirloom and hybrid seed producers promote thousands more varieties in their catalogs. Scott has developed a variety he thinks can challenge the heirlooms for flavor, at an affordable price, if only he can convince some Florida growers to plant it and pick it closer to ripeness. He calls it the Tasti-Lee. I haven't sampled it yet, but I'm growing some of Scott's seeds this summer, along with 12 different heirlooms, a yellow tomato from Siberia, wild cherry tomatoes from the mountains of Mexico and sugary-sweet grape tomatoes. It's fun, though I'm strictly an amateur. If they get moldy or eaten by bugs, I know I can find good ones at the farmer's market. With tomato growing, as in other walks of life, sometimes the professionals know more than we give them credit for.

BOB CROSLIN / AURORA SELECT

*Discount not available in HI, MI, NC and VT. Average savings based on national GEICO New Policyholder Survey Data through February 2008. Some discounts, coverages, payment plans, and features are not available in all states or in all GEICO companies. Government Employees Insurance Co. GEICO General Insurance Co. • GEICO Indemnity Co. • GEICO Casualty Co. These companies are subsidiaries of Berkshire Hathaway Inc. GEICO auto insurance is not available in Mass. GEICO: Washington, DC 20076. © 2008 GEICO

THE BEACH

A new exhibition of oversized photographs by Richard Misrach invites viewers to have fun in the sun. Or does it?

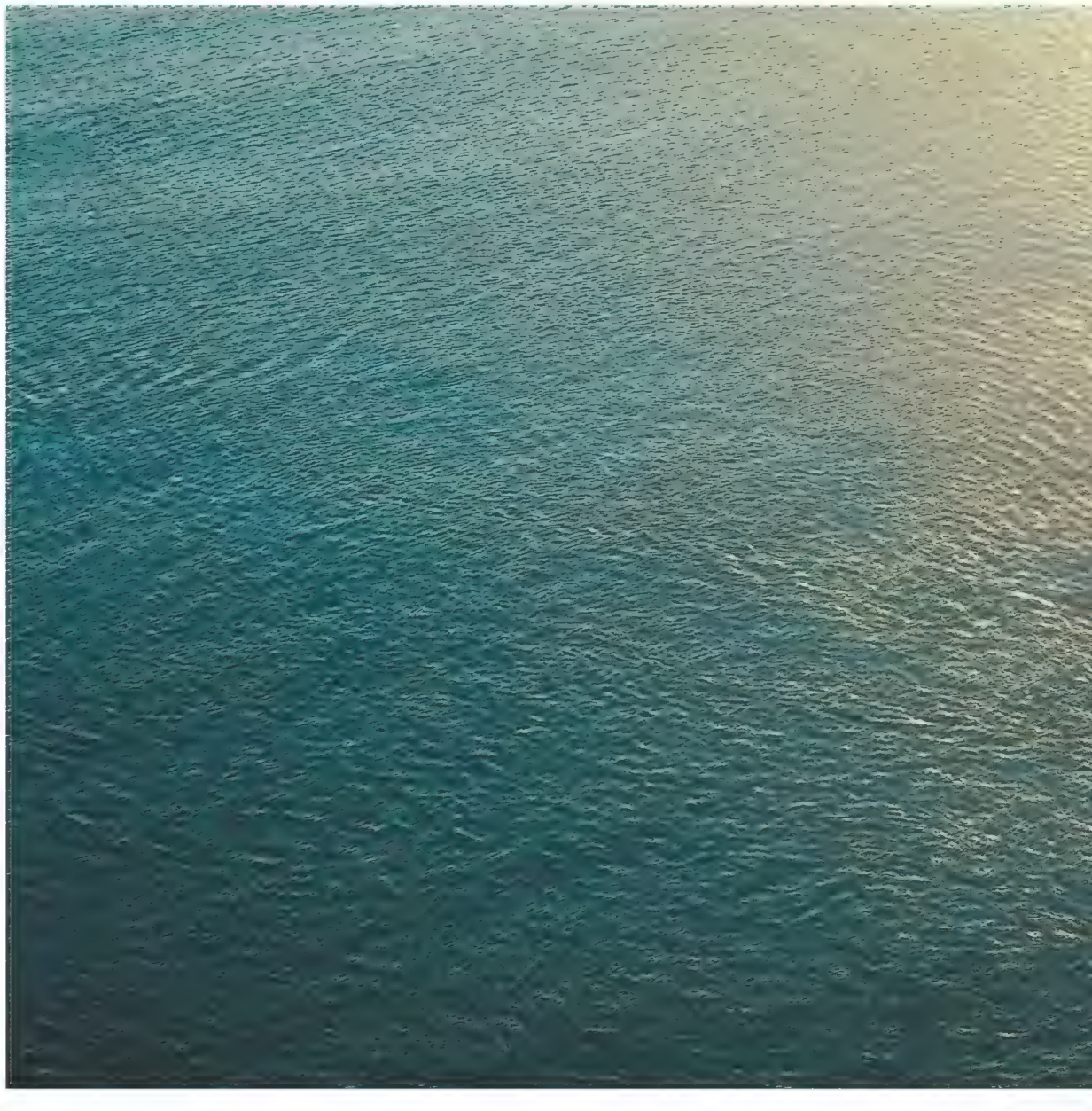
BY KENNETH R. FLETCHER

YOU MIGHT THINK that Richard Misrach took the photographs on these pages while hovering over different beaches around the world. But he actually shot them all from the same high-rise hotel in Hawaii. Misrach, a 59-year-old fine arts photographer known for his pioneering work with color and unsparing images of the despoiled American West, says he enjoyed the lofty perspective from the hotel's balconies: "I always thought about it as being a god's-eye view, looking down and seeing these amazing human interactions."

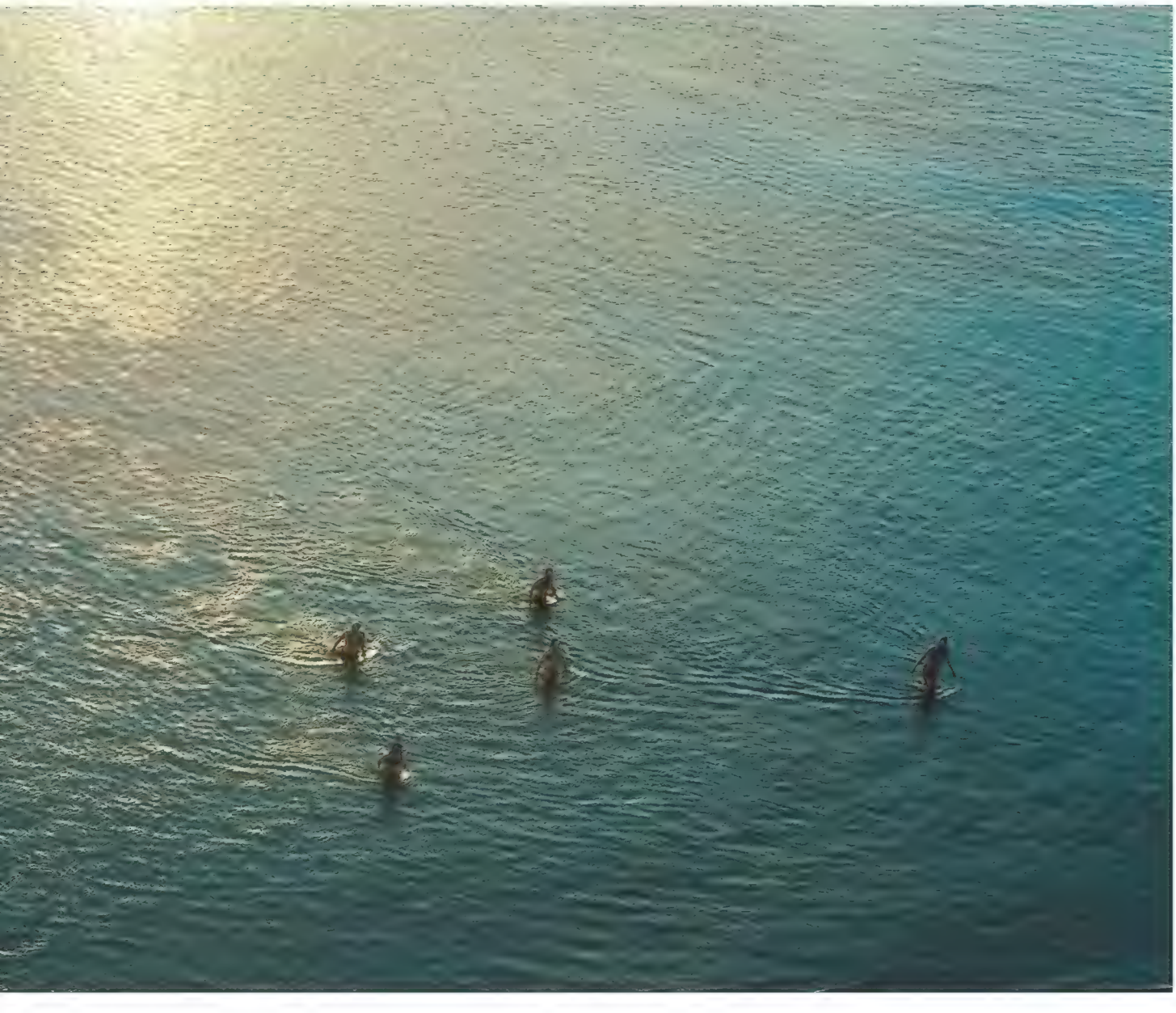
Misrach (above: self-portrait) says he began to notice how "people group up and leave a sort of comfortable space around them—something that maybe would only be revealed when you stand back to see it."

Though the connection may not be obvious, his pictures of people relaxing and playing were deeply influenced by the events of September 11, 2001. That morning, Misrach, who lives in Berkeley, California, happened to be in Washington, D.C., which was shaken by the attack on the Pentagon, and he was anxious about his son, Jake, then a freshman at New York University. He finally reached Jake and was able, a few days later, to drive up to Manhattan. "I went in at night past blockades and got into the city," he says. "There was still ash falling from the sky. It was really eerie. I found Jake and took him to a friend's house outside the city."

After returning to California, Misrach decided to go ahead with a planned trip with his wife, Myriam, to Hawaii, where they had often vacationed. But he was "haunted by the whole experience in New York," he said at the Art Institute of Chicago (the show's organizer). "It changed the way I looked at everything." So even his picture of a lone couple on a



KENNETH R. FLETCHER *is the magazine's editorial intern.*



After 9/11, Misrach began seeing people in the ocean as quite vulnerable. "They were having a good time," he says, "but there was a weird tension." In the image at left, for instance, the swimmers' gestures conveyed to him a sense of flight from some unknown threat. Without a context, he says, "you just see this vast sea and these people."

beach can be vaguely unsettling: their isolation underscores their vulnerability, and the photographer's long-range viewpoint is clearly that of someone *watching*. It's no accident that the title Misrach gave to the exhibition and book of photographs taken in Hawaii over four years is "On the Beach," from the 1957 Nevil Shute novel about life after a nuclear holocaust.

The photographs are, in a word, stunning: the largest measure 6 by 10 feet and are so detailed you can read the headlines on a beachgoer's newspaper. To create the pictures, Misrach used a view camera that holds 8-by-10-inch negatives, which, he says, "give you a level of definition that you'd never get with a 35-millimeter camera." He scanned the negatives into a computer, and sometimes digitally removed people, heightening the feeling of isolation. When he was satisfied with an image, it was burned with lasers onto photographic paper that then went through a chemical developing process.

These ambiguous pictures would appear to be a departure from his best-known series, including the politically overt "Cancer Alley" of 2000, which exposed industrial pollution along the Mississippi River, and his 1990 "Bravo 20," about the devastating environmental effects of bomb tests at a U.S. Navy range in Nevada. The beach images "seem much more beautiful, almost in a way more soft than some of his other work," says Sarah Greenough, photography curator at the National Gallery of Art in Washington, D.C., where the show is on view through September 1, before moving to the Henry Art Gallery in Seattle and the High Museum of Art in Atlanta. "After you look at them for a while, though, they are hardly soft at all. There really is something very ominous going on."

Misrach says the new work is of a piece with his focus on people and the environment. But, he says, "it is much more about our relationship to the bigger sublime picture of things."

ALL PHOTOS COURTESY OF FRAENKEL GALLERY, SF; MARC SELWYN FINE ART, LA; AND PACE/MACGILL GALLERY, NY

A "satellite" view, says Misrach, hints at "surveillance or even voyeurism." The scene is romantic, but the couple is also isolated. "It's kind of like the end of the world."

For an interview with Richard Misrach, go to Smithsonian.com/beaches

CRIMINAL MINDS

In 1924, Nathan Leopold and Richard Loeb kidnapped and murdered a 14-year-old boy. An outraged nation cried for vengeance, but the famed attorney Clarence Darrow had a trick up his sleeve

BY SIMON BAATZ

NATHAN LEOPOLD WAS IN A BAD mood. That evening, on November 10, 1923, he had agreed to drive with his friend and lover, Richard Loeb, from Chicago to the University of Michigan—a journey of six hours—to burglarize Loeb's former fraternity, Zeta Beta Tau. But they had managed to steal only $80 in loose change, a few watches, some penknives and a typewriter. It had been a big effort for very little reward and now, on the journey back to Chicago, Leopold was querulous and argumentative. He complained bitterly that their relationship was too one-sided: he always joined Loeb in his escapades, yet Loeb held him at arm's length.

Eventually Loeb managed to quiet Leopold's complaints with reassurances of his affection and loyalty. And as they continued to drive along the country roads in the direction of Chicago, Loeb started to talk about his idea to carry out the perfect crime. They had committed several burglaries together, and they had set fires on a couple of occasions, but none of their misdeeds had been reported in the newspapers. Loeb wanted to commit a crime that would set all of Chicago talking.

THE DEFENDANTS
Nathan Leopold (left) and his lover Richard Loeb confessed that they had kidnapped and murdered Bobby Franks solely for the thrill of the experience.

What could be more sensational than the kidnapping and murder of a child? If they demanded a ransom from the parents, so much the better. It would be a difficult and complex task to obtain the ransom without being caught. To kidnap a child would be an act of daring—and no one, Loeb proclaimed, would ever know who had accomplished it.

LEOPOLD AND LOEB HAD MET in the summer of 1920. Both boys had grown up in Kenwood, an exclusive Jewish neighborhood on the South Side of Chicago. Leopold was a brilliant student who matriculated at the University of Chicago at the age of 15. He also earned distinction as an amateur ornithologist, publishing two papers in *The Auk*, the leading ornithological journal in the United States. His family was wealthy and well connected. His father was an astute businessman who had inherited a shipping company and had made a second fortune in aluminum can and paper box manufacturing. In 1924, Leopold, 19, was studying law at the University of Chicago; everyone expected that his career would be one of distinction and honor.

Richard Loeb, 18, also came from a wealthy family. His father, the vice president of Sears, Roebuck & Company, possessed an estimated fortune of $10 million. The third son in a family of four boys, Loeb had distinguished himself early, graduating from University High School at the age of 14 and matriculating later the same year at the University of Chicago. His experience as a student at the university, however, was not a happy one. Loeb's classmates were several years older and he earned only mediocre grades. At the end of his sophomore year, he transferred to the University of Michigan, where he remained a lackluster student who spent more time playing cards and reading dime novels than sitting in the classroom. And he became an alcoholic during his years at Ann Arbor. Nevertheless he managed to graduate from Michigan, and in 1924 he was back in Chicago, taking graduate courses in history at the university.

The two teenagers had renewed their friendship upon Loeb's return to Chicago in the fall of 1923. They seemed to have little in common—Loeb was gregarious and extroverted; Leopold misanthropic and aloof—yet they soon became intimate companions. And the more Leopold learned about Loeb, the stronger his attraction for the other boy. Loeb was impossibly good-looking: slender but well built, tall, with brown-blond hair, humorous eyes and a sudden attractive smile; and he had an easy, open charm. That Loeb would often indulge in purposeless, destructive behavior—stealing cars, setting fires and smashing storefront windows—did nothing to diminish Leopold's desire for Loeb's companionship.

Loeb loved to play a dangerous game, and he sought always to raise the stakes. His vandalism was a source of intense exhilaration. It pleased him also that he could rely on Leopold to accompany him on his escapades; a companion whose admiration reinforced Loeb's self-image as a master criminal. True, Leopold was annoyingly egotistical. He had an irritating habit of bragging about his supposed accomplishments, and it quickly became tiresome to listen to Leopold's empty, untrue boast that he could speak 15 languages. Leopold also had a tedious obsession with the philosophy of Friedrich Nietzsche. He would talk endlessly about the mythical superman who, because he was a superman, stood outside the law, beyond any moral code that might constrain the actions of ordinary men. Even murder, Leopold claimed, was an acceptable act for a superman to commit if the deed gave him pleasure. Morality did not apply in such a case.

Leopold had no objection to Loeb's plan to kidnap a child. They spent long hours together that winter, discussing the crime and planning its details. They decided upon a $10,000 ransom, but how would they obtain it? After much debate they came up with a plan they thought foolproof: they would direct the victim's father to throw a packet containing the money from the train that traveled south of Chicago along the elevated tracks west of Lake Michigan. They would be waiting below in a car; as soon as the ransom hit the ground, they would scoop it up and make good their escape.

"A thirst for knowledge is highly commendable, no matter what extreme pain or injury it may inflict upon others," Leopold once told a newspaper reporter.

THE CRIME SCENE
Leopold dropped a piece of crucial evidence—a pair of eyeglasses—at the remote culvert where he and Loeb had disposed of the boy's body.

On the afternoon of May 21, 1924, Leopold and Loeb drove their rental car slowly around the streets of the South Side of Chicago, looking for a possible victim. At 5 o'clock, after driving around Kenwood for two hours, they were ready to abandon the kidnapping for another day. But as Leopold drove north along Ellis Avenue, Loeb, sitting in the rear passenger seat, suddenly saw his cousin, Bobby Franks, walking south on the opposite side of the road. Bobby's father, Loeb knew, was a wealthy businessman who would be able to pay the ransom. He tapped Leopold on the shoulder to indicate they had found their victim.

Leopold turned the car in a circle, driving slowly down Ellis Avenue, gradually pulling alongside Bobby.

"Hey, Bob," Loeb shouted from the rear window. The boy turned slightly to see the Willys-Knight stop by the curb. Loeb leaned forward, into the front passenger seat, to open the front door.

"Hello, Bob. I'll give you a ride."

The boy shook his head—he was almost home.

BETTMANN / CORBIS; PP. 70-71 UNDERWOOD & UNDERWOOD / CORBIS

"No, I can walk."

"Come on in the car; I want to talk to you about the tennis racket you had yesterday. I want to get one for my brother."

Bobby had moved closer now. He was standing by the side of the car. Loeb looked at him through the open window. Bobby was so close. . . . Loeb could have grabbed him and pulled him inside, but he continued talking, hoping to persuade the boy to climb into the front seat.

Bobby stepped onto the running board. The front passenger door was open, inviting the boy inside . . . and then suddenly Bobby slid himself into the front seat, next to Leopold.

Loeb gestured toward his companion, "You know Leopold, don't you?"

Bobby glanced sideways and shook his head—he did not recognize him.

"No."

"You don't mind [us] taking you around the block?"

"Certainly not." Bobby turned around in the seat to face Loeb; he smiled at his cousin with an open, innocent grin, ready to banter about his success in yesterday's tennis game.

The car slowly accelerated down Ellis Avenue. As it passed 49th Street, Loeb felt on the car seat beside him for the chisel. Where had it gone? There it was! They had taped up the blade so that the blunt end—the handle—could be used as a club. Loeb felt it in his hand. He grasped it more firmly.

At 50th Street, Leopold turned the car left. As it made the turn, Bobby looked away from Loeb and glanced toward the front of the car.

Loeb reached over the seat. He grabbed the boy from behind with his left hand, covering Bobby's mouth to stop him from crying out. He brought the chisel down hard—it smashed into the back of the boy's skull. Once again he pounded the chisel into the skull with as much force as possible—but the boy was still conscious. Bobby had now twisted halfway around in the seat, facing back to Loeb, desperately raising his arms as though to protect himself from the blows. Loeb smashed the chisel down two more times into Bobby's forehead, but still he struggled for his life.

The fourth blow had gashed a large hole in the boy's forehead. Blood from the wound was everywhere, spreading across the seat, splashed onto Leopold's trousers, spilling onto the floor.

It was inexplicable, Loeb thought, that Bobby was still conscious. Surely those four blows would have knocked him out?

Loeb reached down and pulled Bobby suddenly upwards, over the front seat into the back of the car. He jammed a rag down the boy's throat, stuffing it down as hard as possible. He tore off a large strip of adhesive tape and taped the mouth shut. Finally! The boy's moaning and crying had stopped. Loeb relaxed his grip. Bobby slid off his lap and lay crumpled at his feet.

Leopold and Loeb had expected to carry out the perfect crime. But as they disposed of the body—in a culvert at a remote spot several miles south of Chicago—a pair of eyeglasses fell from Leopold's jacket onto the muddy ground. Upon returning to the city, Leopold dropped the ransom letter into a post box; it would arrive at the Franks house at 8 o'clock the next morning. The following day, a passerby spotted the body and notified the police. The Franks family confirmed the identity of the victim as that of 14-year-old Bobby. The perfect crime had unraveled and now there was no longer any thought, on the part of Leopold and Loeb, of attempting to collect the ransom.

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PUSH WATERWAY: PINCHOT

KIDNAPERS KILL BOY AS WEALTHY FATHER

THE BOY
Loeb lured his 14-year-old cousin, Bobby Franks, into a car and then bludgeoned him with the handle of a chisel.

By tracing Leopold's ownership of the eyeglasses, the state's attorney, Robert Crowe, was able to determine that Leopold and Loeb were the leading suspects.

Ten days after the murder, on May 31, both boys confessed and demonstrated to the state's attorney how they had killed Bobby Franks.

Crowe boasted to the press that it would be "the most complete case ever presented to a grand or petit jury" and that the defendants would certainly hang. Leopold and Loeb had confessed and shown the police crucial evidence—the typewriter used for the ransom letter—that linked them to the crime.

The trial, Crowe quickly realized, would be a sensation. Nathan Leopold admitted they had murdered Bobby solely for the thrill of the experience. ("A thirst for knowledge is highly commendable, no matter what extreme pain or injury it may inflict upon others," Leopold had told a newspaper reporter. "A 6-year-old-boy is justified in pulling the wings from a fly, if by so doing he learns that without wings the fly is helpless.") The defendants' wealth, their intellectual ability, the high regard within Chicago for their families and the capricious nature of the homicide—everything combined to make the crime one of the most intriguing murders in the history of Cook County.

Crowe also realized that he could turn the case to his own advantage. He was 45 years old, yet already he had had an illustrious career as chief justice of the criminal court

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THE CHICAGO DAILY NEWS; BETTMANN / CORBIS

THE PROSECUTION
State's Attorney Robert Crowe said that the crime was the "most complete case" ever presented to a jury and that he would seek the death penalty.

and, since 1920, as state's attorney of Cook County. Crowe was a leading figure in the Republican Party with a realistic chance of winning election as Chicago's next mayor. To send Leopold and Loeb to the gallows for their murder of a child would, no doubt, find favor with the public.

Indeed, the public's interest in the trial was driven by more than lurid fascination with the grisly details of the case. Sometime within the past few years the country had experienced a shift in public morality. Women now bobbed their hair, smoked cigarettes, drank gin and wore short skirts; sexuality was everywhere and young people were eagerly taking advantage of their new freedoms. The traditional ideals—centered on work, discipline and self-denial—had been replaced by a culture of self-indulgence. And what single event could better illustrate the dangers of such a transformation than the heinous murder of Bobby Franks? The evangelical preacher Billy Sunday, passing through Chicago on his way to Indiana, warned that the killing could be "traced to the moral miasma which contaminates some of our 'young intellectuals.' It is now considered fashionable for higher education to scoff at God. . . . Precocious brains, salacious books, infidel minds—all these helped to produce this murder."

But while Crowe could count on the support of an outraged public, he faced a daunting adversary in the courtroom. The families of the confessed murderers had hired Clarence Darrow as defense attorney. By 1894, Darrow had achieved notoriety within Cook County as a clever speaker, an astute lawyer and a champion of the weak and defenseless. One year later, he would become the most famous lawyer in the country, when he successfully defended Socialist labor leader Eugene Debs against conspiracy charges that grew out of a strike against the Pullman Palace Car Company. Crowe could attest firsthand to Darrow's skills. In 1923, Darrow had humiliated him in the corruption trial of Fred Lundin, a prominent Republican politician.

Like Crowe, Darrow knew that he might be able to play the trial of Leopold and Loeb to his advantage. Darrow was passionately opposed to the death penalty; he saw it as a barbaric and vengeful punishment that served no purpose except to satisfy the mob. The trial would provide him with the means to persuade the American public that the death penalty had no place in the modern judicial system.

Darrow's opposition to capital punishment found its

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THE DEFENSE
Attorney Clarence Darrow argued for leniency in sentencing on the grounds of mental illness. (Lettering is backward on the original negatives.)

greatest source of inspiration in the new scientific disciplines of the early 20th century. "Science and evolution teach us that man is an animal, a little higher than the other orders of animals; that he is governed by the same natural laws that govern the rest of the universe," he wrote in the magazine *Everyman* in 1915. Darrow saw confirmation of these views in the field of dynamic psychiatry, which emphasized infantile sexuality and unconscious impulses and denied that human actions were freely chosen and rationally arranged. Individuals acted less on the basis of free will and more as a consequence of childhood experiences that found their expression in adult life. How, therefore, Darrow reasoned, could any individual be responsible for his or her actions if they were predetermined?

Endocrinology—the study of the glandular system—was another emerging science that seemed to deny the existence of individual responsibility. Several recent scientific studies had demonstrated that an excess or deficiency of certain hormones produced mental and physical alterations in the afflicted person. Mental illness was closely correlated with physical symptoms that were a consequence of glandular action. Crime, Darrow believed, was a medical problem. The courts, guided by psychiatry, should abandon punishment as futile and in its place should determine the proper course of medical treatment for the prisoner.

Such views were anathema to Crowe. Could any philosophy be more destructive of social harmony than Darrow's? The murder rate in Chicago was higher than ever, yet Darrow would do away with punishment. Crime, Crowe believed, would decline only through the more rigorous application of the law. Criminals were fully responsible for their actions and should be treated as such. The stage was set for an epic courtroom battle.

"Precocious brains, salacious books, infidel minds—all these helped to produce this murder," declared the evangelical preacher Billy Sunday.

Still, in terms of legal strategy, the burden fell heaviest on Darrow. How would he plead his clients? He could not plead them innocent, since both had confessed. There had been no indication that the

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state's attorney had obtained their statements under duress. Would Darrow plead them not guilty by reason of insanity? Here too was a dilemma, since both Leopold and Loeb appeared entirely lucid and coherent. The accepted test of insanity in the Illinois courts was the inability to distinguish right from wrong and, by this criterion, both boys were sane.

On July 21, 1924, the opening day of court, Judge John Caverly indicated that the attorneys for each side could present their motions. Darrow could ask the judge to appoint a special commission to determine if the defendants were insane. The results of an insanity hearing might abrogate the need for a trial; if the commission decided that Leopold and Loeb were insane, Caverly could, on his own initiative, send them to an asylum.

It was also possible that the defense would ask the court to try each defendant separately. Darrow, however, already had expressed his belief that the killing was a consequence of each defendant influencing the other. There was no indication, therefore, that the defense would argue for a severance.

Nor was it likely that Darrow would ask the judge to delay the start of the trial beyond August 4, its assigned date. Caverly's term as chief justice of the criminal court would expire at the end of August. If the defense requested a continuance, the new chief justice, Jacob Hopkins, might assign a different judge to hear the case. But Caverly was one of the more liberal justices on the court; he had never voluntarily sentenced a defendant to death; and it would be foolish for the defense to request a delay that might remove him from the case.

Darrow might also present a motion to remove the case from the Cook County Criminal Court. Almost immediately after the kidnapping, Leopold had driven the rental car across the state line into Indiana. Perhaps Bobby had died outside Illinois and therefore the murder did not fall within the jurisdiction of the Cook County court. But Darrow had already declared that he would not ask for a change of venue and Crowe, in any case, could still charge Leopold and Loeb with kidnapping, a capital offense in Illinois, and hope to obtain a hanging verdict.

Darrow chose none of these options. Nine years earlier, in an otherwise obscure case, Darrow had pleaded Russell Pethick guilty of the murder of a 27-year-old housewife and her infant son but had asked the court to mitigate the punishment on account of the defendant's mental illness. Now he would attempt the same strategy in the defense of Nathan Leopold and Richard Loeb. His clients were guilty of murdering Bobby Franks, he told Caverly. Nevertheless he wished the judge to consider three mitigating factors in determining their punishment: their age, their guilty plea and their mental condition.

It was a brilliant maneuver. By pleading them guilty, Darrow avoided a trial by jury. Caverly would now preside over a hearing to determine punishment—a punishment that might range from the death penalty to a minimum of 14 years in prison. Clearly it was preferable for Darrow to argue his case before a single judge than before 12 jurors susceptible to public opinion and Crowe's inflammatory rhetoric.

Darrow had turned the case on its head. He no longer needed to argue insanity in order to save Leopold and Loeb from the gallows. He now needed only to persuade the judge that they were mentally ill—a medical condition, not at all equivalent or comparable to insanity—to obtain a reduction in their sentence. And Darrow needed only a reduction from death by hanging to life in prison to win his case.

And so, during July and August 1924, the psychiatrists presented their evidence. William Alanson White, the president of the American Psychiatric Association, told the court that both Leopold and Loeb had experienced trauma

Richard Loeb "considered himself the master criminal mind of the century, controlling a large band of criminals, whom he directed," a psychiatrist for the defense testified.

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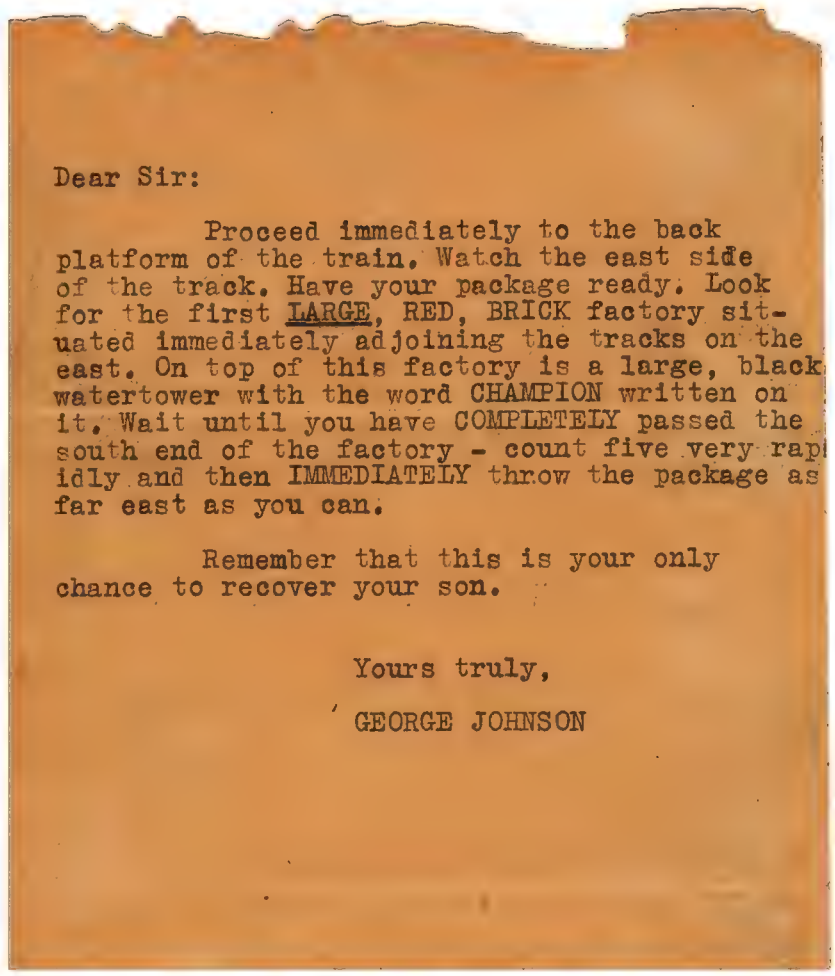

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GEORGE JOHNSON

COURT IN SESSION
Defense team psychiatrists examine Leopold (right). Darrow (above: at left, with arm on bench), before Judge John Caverly at Cook County Criminal Court, surprised the prosecution by entering a guilty plea. Right, top: Police quickly traced the ransom letter sent to the family of Bobby Franks to Leopold's typewriter.

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at an early age at the hands of their governesses. Loeb had grown up under a disciplinary regimen so exacting that, in order to escape punishment, he had had no other recourse but to lie to his governess, and so, in White's account at least, he had been set on a path of criminality. "He considered himself the master criminal mind of the century," White testified, "controlling a large band of criminals, whom he directed; even at times he thought of himself as being so sick as to be confined to bed, but so brilliant and capable of mind . . . [that] the underworld came to him and sought his advice and asked for his direction." Leopold also had been traumatized, having been sexually intimate with his governess at an early age.

Other psychiatrists—William Healy, the author of *The Individual Delinquent*, and Bernard Glueck, professor of psychiatry at the New York Postgraduate School and Hospital—confirmed that both boys possessed a vivid fantasy life. Leopold pictured himself as a strong and powerful slave, favored by his sovereign to settle disputes in single-handed combat. Each fantasy interlocked with the other. Loeb, in translating his fantasy of being a criminal mastermind into reality, required an audience for his misdeeds and gladly recruited Leopold as a willing participant. Leopold needed to play the role of the slave to a powerful sovereign—and who, other than Loeb, was available to serve as Leopold's king?

Crowe had also recruited prominent psychiatrists for the

prosecution. They included Hugh Patrick, president of the American Neurological Association; William Krohn and Harold Singer, authors of *Insanity and the Law: A Treatise on Forensic Psychiatry*; and Archibald Church, professor of mental diseases and medical jurisprudence at Northwestern University. All four testified that neither Leopold nor Loeb displayed any sign of mental derangement. They had examined both prisoners in the office of the state's attorney shortly after their arrest. "There was no defect of vision," Krohn testified, "no defect of hearing, no evidence of any defect of any of the sense paths or sense activities. There was no defect of the nerves leading from the brain as evidenced by gait or station or tremors."

Each set of psychiatrists—one for the state, the other for the defense—contradicted the other. Few observers noticed that each side spoke for a different branch of psychiatry and was, therefore, separately justified in reaching its verdict. The expert witnesses for the state, all neurologists, had found no evidence that any organic trauma or infection might have damaged either the cerebral cortex or the central nervous system of the defendants. The conclusion reached by the psychiatrists for the prosecution was, therefore, a correct one—there was no mental disease.

The psychiatrists for the defense—White, Glueck and Healy—could assert, with equal justification, that, according to their understanding of psychiatry, an understanding informed by psychoanalysis, the defendants had suffered mental trauma during childhood that had damaged each boy's ability to function competently. The result was compensatory fantasies that had led directly to the murder.

Most commentators, however, were oblivious to the epistemological gulf that separated neurology from psychoanalytic psychiatry. The expert witnesses all claimed to be psychiatrists, after all; and it was, everyone agreed, a dark day for psychiatry when leading representatives of the profession could stand up in court and contradict each other. If men of national reputation and eminence could not agree on a common diagnosis, then could any value be attached to a psychiatric judgment? Or perhaps each group of experts was saying only what the lawyers required them to say—for a fee, of course.

It was an evil that contaminated the entire profession, thundered the *New York Times*, in an editorial similar to dozens of others during the trial. The experts in the hearing were "of equal authority as alienists and psychiatrists," apparently in possession of the same set of facts, who, nevertheless, gave out "opinions exactly opposite and contradictory as to the past and present condition of the two prisoners. . . . Instead of seeking truth for its own sake and with no preference as to what it turns out to be, they are supporting, and are expected to support, a predetermined purpose. . . . That the presiding Judge," the editorial writer concluded sorrowfully, "is getting any help from those men toward the forming of his decision hardly is to be believed."

At 9:30 on the morning of September 10, 1924, Caverly prepared to sentence the prisoners. The final day of the hearing was to be broadcast live over station WGN, and throughout the city, groups of Chicagoans clustered around radio sets to listen. The metropolis had paused in its morning bustle to hear the verdict.

Caverly's statement was brief. In determining punishment, he gave no weight to the guilty plea. Normally a guilty plea could mitigate punishment if it saved the prosecution the time and trouble of demonstrating culpability; but that had not been the case on this occasion.

The psychiatric evidence also could not be considered in mitigation. The defendants, Caverly stated, "have been shown in essential respects to be abnormal. . . . The careful analysis made of the life history of the defendants and of their present mental, emotional and ethical condition has been of extreme interest. . . . And yet the court feels strongly that similar analyses made of other persons accused of crime would probably reveal similar or different abnormalities. . . . For this reason the court is satisfied that his judgment in the present case cannot be affected thereby."

Nathan Leopold and Richard Loeb had been 19 and 18 years old, respectively, at the time of the murder. Did their youth mitigate the punishment? The prosecuting attorneys, in their concluding statements to the court, had emphasized that many murderers of similar age had been executed in Cook County; and none had planned their deeds with as much deliberation and forethought as Leopold and Loeb. It would be outrageous, Crowe had argued, for the prisoners to escape the death penalty when others—some even younger than 18—had been hanged.

Yet, Caverly decided he would hold back from imposing the extreme penalty on account of the age of the defendants. He sentenced each defendant to 99 years for the kidnapping and life in prison for the murder. "The court be-

"The evidence shows that both defendants are atheists and followers of the Nietzschean doctrines," the prosecutor said in a statement.

CONVICTED
Loeb and Leopold (top: mug shots) begin serving "life + 99 years." Loeb was fatally stabbed in a shower room 12 years later.

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lieves," Caverly stated, "that it is within his province to decline to impose the sentence of death on persons who are not of full age. This determination appears to be in accordance with the progress of criminal law all over the world and with the dictates of enlightened humanity."

THE VERDICT WAS A VICTORY for the defense, a defeat for the state. The guards allowed Leopold and Loeb to shake Darrow's hand before escorting the prisoners back to their cells. Two dozen reporters crowded around the defense table to hear Darrow's response to the verdict and, even in his moment of victory, Darrow was careful not to seem too triumphal: "Well, it's just what we asked for but . . . it's pretty tough." He pushed back a lock of hair that had fallen over his forehead, "It was more of a punishment than death would have been."

Crowe was furious at the judge's decision. In his statement to the press, Crowe made sure everyone knew whom to blame: "The state's attorney's duty was fully performed. He is in no measure responsible for the decision of the court. The responsibility for that decision rests with the judge alone." Later that evening, however, Crowe's rage would emerge in full public view, when he issued another, more inflammatory statement: "[Leopold and Loeb] had the reputation of being immoral . . . degenerates of the worst type. . . . The evidence shows that both defendants are atheists and followers of the Nietzschean doctrines . . . that they are above the law, both the law of God and the law of man. . . . It is unfortunate for the welfare of the community that they were not sentenced to death."

As for Nathan Leopold and Richard Loeb, their fates would take divergent paths. In 1936, inside Stateville Prison, James Day, a prisoner serving a sentence for grand larceny, stabbed Loeb in the shower room and despite the best efforts of the prison doctors, Loeb, then 30 years old, died of his wounds shortly afterward.

Leopold served 33 years in prison until he won parole in 1958. At the parole hearing, he was asked whether he realized that every media outlet in the country would want an interview with him. Already there was a rumor that Ed Murrow, the CBS correspondent, wanted him to appear on his television show "See It Now." "I don't want any part of lecturing, television or radio, or trading on the notoriety," Leopold replied. The confessed murderer who had once deemed himself a superman stated, "All I want, if I am so lucky as to ever see freedom again, is to try to become a humble little person."

RELEASED
After serving 33 years in prison, Nathan Leopold was paroled in March 1958. He lived out his days quietly in Puerto Rico.

Upon his release, Leopold moved to Puerto Rico, where he lived in relative obscurity, studying for a degree in social work at the University of Puerto Rico, writing a monograph on the birds of the island, and, in 1961, marrying Trudi Garcia de Quevedo, the expatriate widow of a Baltimore physician. During the 1960s, Leopold was finally able to travel to Chicago. He returned to the city often, to see old friends, to tour the South Side neighborhood near the university and to place flowers on the graves of his mother and father and two brothers.

It had been so long ago—that summer of 1924, in the stuffy courtroom on the sixth floor of the Cook County Criminal Court—and now he was the sole survivor. The crime had passed into legend; its thread had been woven into the tapestry of Chicago's past; and when Nathan Leopold, at age 66, died in Puerto Rico of a heart attack on August 29, 1971, the newspapers wrote of the murder as the crime of the century, an event so inexplicable and so shocking that it would never be forgotten.

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The guitarist (in a 2006 concert) showed that you could build a pop record around a rhythm and a rhyme.

PHIL MCAULIFFE / POLARIS

Who Do You Love?

Bo Diddley's beat changed the course of rock music. And his lyrics evoked a history that reached all the way to Africa **BY NED SUBLETTE**

I HELPED BO DIDDLEY FIND A DRUMMER ONCE.

It was in 1971. I was 19, reading underground comics one sleepy afternoon at Roach Ranch West, a spacious, hippie-stuff shop in Albuquerque, when a black man wearing a big black hat walked in and said: "I'm Bo Diddley."

It was, in the argot of the day, a cosmic moment. Could this really be Bo "47 miles of barbed wire" Diddley stepping out of the blue, announcing his presence in a remote desert city? Was I hallucinating?

No, it really was that founding father of rock 'n' roll. He had relocated his family from Southern California to Los Lunas, New Mexico, after being shaken up by a big earthquake, and he wanted to play a free show.

"Do you know any drummers?" he asked.

It happened that there was a drummer in the Roach Ranch at that very moment—Mike Fleming, who played with a local cover band called Lemon. I pointed him out. They spoke, and Bo Diddley said he'd be back later. Somebody called the local Top 40 station to announce the show.

Bo Diddley played that night to a packed-out back room at Roach Ranch West, with his wife and three daughters singing with him and Mike Fleming on drums. I sat on the floor in front of the improvised stage, close enough for him to sweat on me, studying him as he pulled a variety of sounds out of his cranked-up rhythm guitar to drive the audience wild. He wasn't doing an oldies show, he was doing funky

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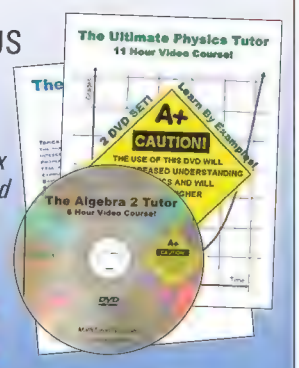

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new material. I shouted and shouted for "Who Do You Love." Which, finally, he played.

ELLAS MCDANIEL, professionally known as Bo Diddley, died June 2 at the age of 79. He is remembered above all for his signature rhythm. Tell any drummer, in any bar band anywhere, to play a Bo Diddley beat, and he'll know what to do.

But Bo Diddley was so much more than a beat. He was a transforming figure. After him, music was different. His debut single, "Bo Diddley" (1955), announced that the whole game had changed. He showed how you could build a whole pop record around a rhythm and a rhyme. You didn't even need chord changes.

He put the beat front and center. To make that work, he chose the most compelling beat he could: the two-bar rhythm that Cubans know as clave. All the Chicago blues guys dipped into rumba blues, but this was another take on it. The Latin connection was so strong that Bo Diddley used maracas as a basic component of his sound. But sidekick Jerome Green didn't play maracas like a Cuban, and Bo Diddley didn't play that rhythm like a Cuban; he swung it, like an African-American who'd been playing on street corners in Chicago. And Bo Diddley's way of expressing that two-bar feel, known across a wide swath of Africa, was in turn a fountainhead for the development of rock 'n' roll, which would repeatedly cross Afro-Cuban and African-American rhythmic sensibilities.

Cover bands play the Bo Diddley beat formulaically. But in Bo Diddley's hands, the beat was alive. He did something different with it every time he recorded it. It's the difference between copying and creating.

HE WAS BORN Ellas Bates in McComb, Mississippi, not far from the Louisiana border, on December 30, 1928. His teenage mother was unable to care for him, and he never knew his father, so the future Bo Diddley was adopted by his mother's cousin Gussie McDaniel, who gave him her last name

"We used to be three dudes going down the street with a washtub, a little raggedy guitar and another cat with maracas," Bo Diddley (in the late 1950s, with Jerome Green on maracas and Frank Kirkland on drums) would recall of his early days in Chicago.

MICHAEL OCHS ARCHIVES / CORBIS

and moved him to Chicago when he was about 7. There he was present at the creation of one of the great American musics: the electric Chicago blues.

The city was full of African-Americans looking for work and escaping the poverty, discrimination and lynchings of the Jim Crow South, and they constituted a strong local audience for music. More than a decade younger than Muddy Waters, and almost 20 years younger than Howlin' Wolf, Ellas McDaniel was a punk kid by comparison. "We used to be three dudes going down the street with a washtub, a little raggedy guitar and another cat with maracas," he told writer Neil Strauss in 2005. "Bo Diddley," his first record, went to No. 1 on the rhythm and blues chart without denting the pop chart. He appeared on "The Ed Sullivan Show" on November 20, 1955—almost a year before Elvis Presley did. But Sullivan got mad at him for playing "Bo Diddley" instead of his one-chord cover version of "Sixteen Tons" (then the top recording in the nation, but by Tennessee Ernie Ford) and never had him back.

A generation of white kids first heard the Bo Diddley beat through cover songs and knockoffs, such as the Everly Brothers' 1957 hit "Bye Bye Love." Buddy Holly's "Not Fade Away" (1957), originally a B-side but his most-covered song over the years, was based on Bo Diddley's "Mona." The entire British Invasion generation felt Bo Diddley's impact. He played dates in the United Kingdom in 1963 with Little Richard, the Everly Brothers and, making their first tour, the Rolling Stones. Bo Diddley's material was a basic building block of the Stones' sound. In 1964, their version of "Not Fade Away," in a style that was more Diddley than Holly, became their first U.S. single.

Bo Diddley revolutionized the texture of pop music. He put the rhythm in the foreground, stripping away the rest, and customized the space with tremolo, distortion, echo and reverb, to say nothing of maracas. The way he chunked on the lower strings was a primary model for what was later known as rhythm guitar. He had lots of space to fill up with his guitar, because his records had no piano and no bass. Which also meant no harmonic complications.

Hanging on a single tone, never changing chords—the writer Robert Palmer called that the "deep blues," something that reached from Chicago back to the front-porch style of Missis-

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sippi and Louisiana. Howlin' Wolf and Muddy Waters recorded one-chord songs before Bo Diddley did, but he made them central to his repertoire.

Both sides of Bo Diddley's first single were one-chord tunes. "I'm a Man," the B-side, cut at the same March 2, 1955, session as "Bo Diddley," was just as potent, with a marching, swinging, one-bar throb that hit a bluesy chord insistently every fourth beat. It was a rewrite of Muddy Waters' "Hoochie Coochie Man," and Waters in turn reworked "I'm a Man" into one of his biggest hits, the one-chord "Mannish Boy," the stretched-out highlight of Martin Scorsese's concert film *The Last Waltz*.

The very name Bo Diddley implies a single chord, though he disclaimed having known the term "diddley bow" when he began using his stage name. The diddley bow, a single strand of wire nailed at both ends to a board, was a fundamental African musical instrument of the down-home American South. Bo Diddley played guitar as if it was a diddley bow with frets, barring up and down with his index finger—he did not play with a bottleneck—while chopping the rhythm with his right hand.

He was a key figure in the invention of psychedelic guitar. He found new ways to mess with the sound, making rhythm out of everything the pickups could detect. At first he couldn't afford an electric guitar; he used spare parts to electrify his acoustic one. He built his own tremolo device, creating a complex sound pattern when he played rhythm chords through it. "Down Home Special" (1956), with its railroad-chug guitar, echo, distorted vocal, rhythmic train whistle sound effect and wash of maracas, all in a minor-key blues, was ten years ahead of its time. The now-classic, much-abused Pete Townshend string scrape—running the edge of the guitar pick down the length of the wrapped wire of the low E string—was lifted from Bo Diddley's 1960 proto-garage classic "Road Runner."

The first instrument Bo Diddley played as a child was the violin—along with the banjo, a common African-American instrument in the 19th and early 20th centuries—and he may have been the first

person to play a blues violin solo in a rock 'n' roll context. With echo, of course.

BO DIDDLEY was an inspired poet with a consistent voice. His lyrics sounded spontaneous and tossed off, but they were coherent. Whatever the improvised circumstances of a song's creation, it resonated with all kinds of meanings, evoking a mysterious reality lurking beneath daily life that reached back to Africa via Mississippi. If Bo Diddley was comical, he was a jester who'd seen something horrifying. In the first four lines of "Who Do You Love" (think of it as "Hoodoo You Love") he walks 47 miles of barbed wire, uses a cobra for a necktie and lives in a house made of rattlesnake hide.

The lyrics of "Bo Diddley" owed something to "Hambone," Red Saunders' 1952 Chicago-made rhythm novelty hit, which in turn referred to a popular lullaby: Hush little baby, don't say a word / Papa's gonna buy you a mockingbird / And if that mockingbird don't sing / Papa's gonna buy you a diamond ring. But Bo Diddley ditched the bird and went straight to the ring, creating one of the iconic verses of rock 'n' roll:

Bo Diddley buy baby diamond ring,
If that diamond ring don't shine,
He gonna take it to a private eye

No other first-generation rock 'n' roller took on a mystical persona and sang about his adventures in the third person.

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By the third verse, he was singing about a hoodoo spell: Mojo come to my house, a black cat bone.

Bo Diddley had been the name of an old vaudeville comedian who was still kicking around on the chitlin circuit when Ellas McDaniel recorded "Bo Diddley." The song's lyrics originally referred to an "Uncle John." Bandmate Billy Boy Arnold claimed to have been the one who suggested replacing those words with the comedian's name. It was an on-the-spot decision, he said, and it was the producer and label owner Leonard Chess who put out the record "Bo Diddley" using Bo Diddley as the artist's name.

It was positively modernist: a song called "Bo Diddley" about the exploits of a character named Bo Diddley, by an artist named Bo Diddley, who played the Bo Diddley beat. No other first-generation rock 'n' roller started out by taking on a mystical persona and then singing about his adventures in the third person. By name-checking himself throughout the lyrics of his debut record, Bo Diddley established what we would now call his brand. Today this approach to marketing is routine for rappers, but Bo Diddley was there 30 years before. He was practically rapping anyway, with stream-of-consciousness rhyming over a rhythm loop.

At a time when black men were not allowed overt expressions of sexuality in mainstream popular music, Bo Diddley, like his Chicago colleagues, was unequivocally masculine. But that did not make him antifeminist: he was the first major rock 'n' roll performer—and one of the few ever—to hire a female lead guitarist, Lady Bo (Peggy Jones), in 1957, and he employed female musicians throughout his career.

"I'm a Man" was recorded the year after the Supreme Court ruled in Brown v. Board of Education. Anyone who hears that song as mere machismo misses a deeper reading of it. It was just 60 years before Ellas Bates was born that the 14th Amendment acknowledged as human beings people who had previously had the legal status of cattle, and who had been forbidden to learn to read and

write: I'm a man / I spell M! A! N!

In case you didn't get what he was driving at, he spelled it out for you. His lyrics evoked a history that the white cover bands could never express: Africa, slavery, the failure of Reconstruction, Jim Crow, peonage, discrimination.

The Yardbirds had a U.S. hit in 1966 with what was by the standards of British rock a very good version of "I'm a Man," but they changed the third verse, because they wouldn't even try to step up to the African-American legend alluded to in the original:

I'm goin' back down
To Kansas to
Bring back the second cousin,
Little John the Conqueroo

High John the Conqueror was a root that root doctors used. You might come back to Chicago from down South with some in your pocket. But in African-American lore, John the Conqueror was also an African king sold into slavery. Bo Diddley was claiming kinship to a king.

BO DIDDLEY made records for decades, improvising lyrics as he went along, creating a body of work that has yet to be appreciated in full. He had a long life, and a good life. He should have had a better one. He complained bitterly that he had been screwed on the money his songs generated. He had to keep working to pay the bills, still traveling around in his 70s.

He played for President and Mrs. Kennedy, as well as for the inauguration of George H. W. Bush. The day after Bo Diddley died, Senator Barack Obama clinched a major party's nomination for president. The general election won't be held until November, but in the meantime we can measure the distance African-Americans have traveled in the half-century since Bo Diddley made those records we still play.

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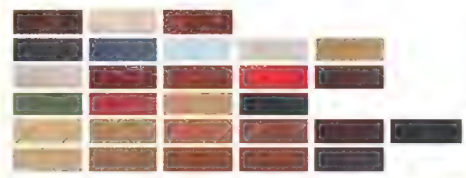

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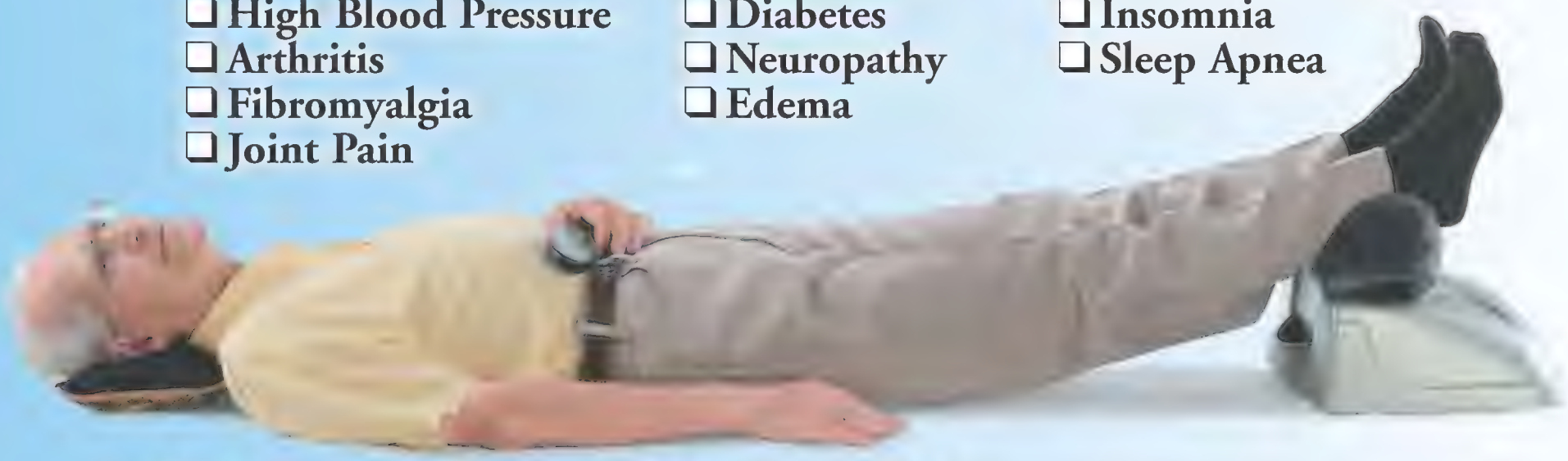

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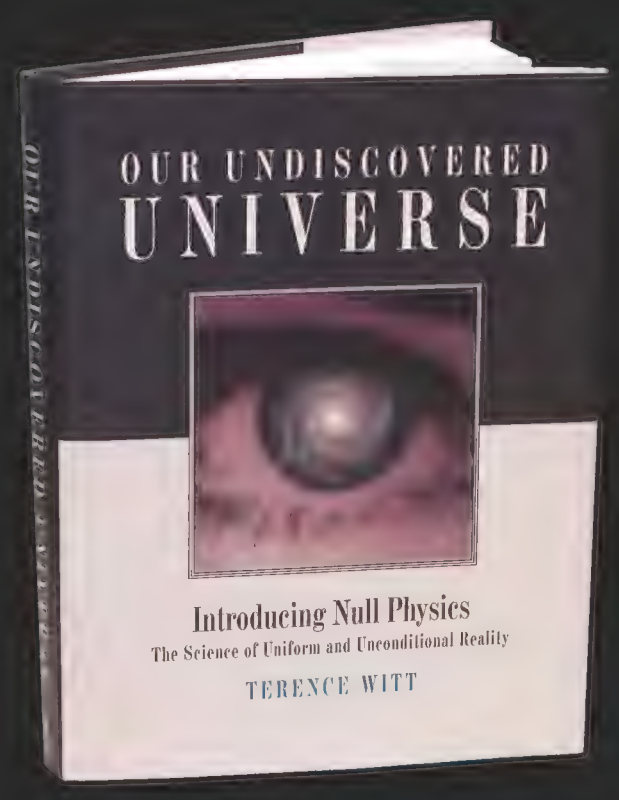

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By John Fleming

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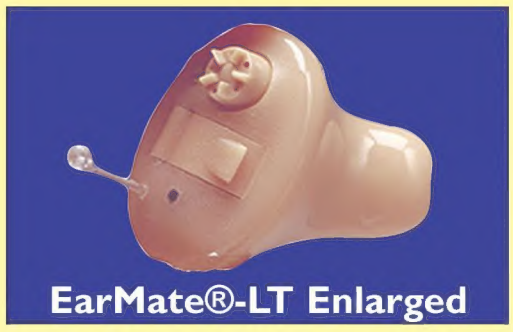

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Growing Up Gambino

Confessions of an alleged Mafia princess **BY MEGAN GAMBINO**

WHEN IT COMES TO THE MAFIA, there are five infamous surnames: Lucchese, Colombo, Genovese, Bonanno and the best known—my own—Gambino. And that name inevitably provokes two words that I've heard more times than I can count, so I might as well just spare you the breath: *Any relation?*

Truth is, I don't entirely know. Some details lend themselves to speculation. My father was born in Ozone Park, Queens, which was the stamping ground of John J. Gotti, who seized control of the Gambino Family in the 1980s. And when my dad and the rest of the family (that's "family," not "Family") moved to Long Island in 1960, it was James "Jimmy the Gent" Burke, the true-life Robert De Niro character in *GoodFellas*, who bought our house. Then too, my uncle goes by the name "Choppy" and is in the construction business. But despite the circumstantial evidence, this branch of the family tree is clean. (Choppy is "Choppy" because his sister couldn't pronounce Charles, his given name, when she was young.) If we're related to the crime family, it's distant.

Blood relative or not, Gambino is a hefty weight to carry. I'm actually a mutt when it comes to ethnic background—more Irish than Italian—but the Italian in me trumps all. As a toddler, I had a T-shirt blazoned with "Bambino Gambino."

I wasn't aware that my last name connected me with a surly underworld until I was old enough for people to ask me about it. In high school, my history teacher warned boys they might find themselves wearing concrete shoes at the bottom of a lake if they messed with me. But I took everything in stride. In fact, I soon learned the name has its benefits.

A couple of years ago, I drove from Vermont to Boston with a few friends from college. While navigating my way through the Big Dig, I mistakenly drove down a street restricted to government vehicles and got pulled over. The officer took my driver's license, stepped away from the car to write up the ticket—then hastily returned. He said he didn't want any trouble; I could barely suppress a smile, as my slack-jawed friends looked on. My boyfriend, who happened to be in the car that day, hadn't met any I-talians before me. But now even he gets comments by association. When Gambinos made headlines this past February with the largest Mafia takedown in memory, his Swedish-American godfather asked him just what he had gotten himself into.

The power of the name grows stronger the closer I get to the Big Apple. (I've found the speed with which I can get a pizza delivered to be a good gauge of its clout.) Not long ago, my family made a reservation at Gallagher's Steak House in Midtown Manhattan. When we got there, the entryway was lined with the entire kitchen and wait staff; as we walked the gantlet to our table (far from any windows), I heard one waiter ask another, "Which one is Mr. Gambino?" But regardless of where I am, whenever a hostess, bouncer, retail worker, librarian or whoever else asks about my family ties, I tend to say "Nah" with a half-smile, to leave some room for doubt.

And if any readers have any smart ideas about sending me less-than-complimentary letters about this piece, you might want to reconsider. Hey, you never know.

MEGAN GAMBINO *is an editorial assistant at* SMITHSONIAN.

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